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EDITORIAL

Graduates in Pharmacy.

THE commencement exercises of the various colleges of pharmacy have occurred too recently to allow of the formation of a very clear estimate of the results of the winter's work, as shown in the number of graduates; but from the accounts that have reached us, the classes appear to have been large. Philadelphia had the largest number: its sixtieth session resulting in 140 graduates. The New York College sends out 65; Chicago, 21; and the Maryland College, 20.

From whichever school the degree is obtained, there need be no doubt of the efficient character of the instruction that has been given, or the thoroughness with which the qualifications of the candidates have been tested. It certainly cannot be said of the pharmaceutical graduates of this country that they are not, as a class, thoroughly qualified for their future work.

Pharmaceutical Legislation.

THE Act drafted by the Committee of the N. Y. State Pharmaceutical Ascociation has undergone considerable changes of late, and in its modified form is now before the Legislature. It has not been found an easy matter to frame it so that everybody should be pleased with its provisions, but it now seems to be as nearly unobjectionable to most persons interested as it well can be. It is to be presumed that there will be those who can find faults in it, but outside of the class whose interests are best served by the absence of any regulation of a legal character, they are not likely to be numerous.

IN Massachusetts, the opposition to the passage of a law to regulate the practice of pharmacy and the sale of medicines and poisons is so determined that there is some doubt of its accomplishment. Strangely enough, the opponents include those whose position in the pharmaceutical profession would warrant the inference that they would be among the first to give their support to a measure for reform. It is, however, an old saying in the Bay State that "there's no telling how some pork will boil."

WESTERN VIRGINIA has at length adopted a "Pharmacy Act," and is to organize a State Association next month.

THE "conditions of the conflict" in Illinois are by no means settled; but, judging from the decided and reiterated references to the proposed Act in Western pharmaceutical and medical journals, there must be a considerable opposition.

Vaccination.—["The Board of Guardians have been discussing, with more or less difference of opinion, the question of vaccinating adult paupers."]

1st Guardian: "What right has a tyrant majority to persecute a miserable minority with the poison of vaccination?"

2d Guardian: "And what right has a miserable minority to propagate disease against the reason of unprotected millions?"

The Miserable Minority: "Look here, gents, you needn't quarrel. The fine's a sixpence, ain't it? Give a bloke the sixpence, and waccinate away."

A Counter-Irritant.—The woman who is forever shopping and never finding anything she wants.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS

Note on the Cananga Oil or Ylang-Ylang Oil.

BY F. A. FLUECKIGER.[1]

THIS oil has acquired some repute in consequence of its aroma, which is pronounced by most observers as exceedingly pleasant; hence it has appeared to me of interest to communicate the following remarks relating to it, and to the plant from which it is derived.

The tree from the flowers of which the oil known as Ylang-Ylang, or Alanguilan, is derived, is *Cananga odorata* Hooker fil. et Thomson,[2] of the nat. fam. Anonaceæ, from which fact it is named in many price-lists Oleum Anonæ or Oleum Unonæ. I do not know whether any mention of the tree can be traced in the old Hindu[3] or Chinese literature. It was first mentioned in the Occident by Ray as "Arbor Saguisan," by which name it was then called in Luçon.[4] Rumph[5] gave a detailed description of the Bonga Cananga, this being the Malay name of the tree (Tsjampa among the Javanese); but Rumph's illustration is defective. Other brief reports were rendered by Lamarck[6] under Canang odorant, Uvaria odorata; according to Roxburgh,[7] the plant was brought, in 1797, from Sumatra to the botanical garden of Calcutta. Dunal gave a somewhat more detailed description of Uvaria odorata, or, rather, Unona odorata, as he himself corrected, in his "Monographie de la famille des Anonacées,"[8] which chiefly repeats the statements of Rumph.

Finally, we owe a very fine illustration of the Cananga odorata to the magnificent Flora Javæ, of Blume,[9] and a copy of this plate, which is handsomely illustrated in the original, is attached to the present paper. I am justified in assuming the illustration to be correct, from the numerous specimens of Cananga which I have seen at De Candolle's, in Geneva, as well as in the Delessert herbarium. The unjustified appellation "Unona odoratissima," which has erroneously been given by many writers, originated with Blanco,[10] who, in describing the strong aroma of the flowers which causes headache in closed sleeping apartments, permitted himself to be carried away to use the superlative "odoratissima." Baillon[11] defines Canangium to be a section of

Ylang-Ylang.

[1] *Arch. der Pharm.*, Vol. 218, I. (1881). Communicated by the author.

[2] Flora Indica, I. (1855), 130.

[3] No mention of any plant or flowers, which might be identified with Cananga, can be traced in any Sanskrit works. Allusions to and praises of *Mitchelia Champaca* are frequent, but no other odoriferous flowers can be interpreted as referring to Cananga. It is probable that the latter was chiefly confined, in earlier times, to Southern India, and to the Malay Archipelago. It may possibly be mentioned in Pali literature and hereafter be identified. —ED. N. R.

[4] Ray, *Historia Plantarum*. Supplem. tomi I. et II. *Hist. stirpium insulæ Luzonensis et Philippinarum* a Georgio Josepho Camello. London, 1704, 83.

[5] *Herbarium Amboinense, Amboinsch Kruidboek*. II. (Amsterdam, 1750), cap. XIX., fol. 195, and plate 65.

[6] *Encyclopédie méthodique*. Botanique I. (1783), 595.

[7] *Flora Indica*, II. (Serampore, 1832), 661.

[8] Paris, 1817, p. 108, 145.

[9] I. (Bruxellis, 1829), fol. 29, pl. IX. and XIV., B.

[10] *Flora de Filipinas*. Manila, 1845, 325: Unona odoratissima, Alangilan. The latter name is said by Sonnerat to be of Chinese origin, according to the statement of Lamarck. Mr. Reymann derives it from the Tagala language.

[11] Dictionnaire de Botanique.

the Genus Uvaria, from which he does not wish to have the Ylang-Ylang tree separated.

The notice of Maximowitz,[12] "On the Origin of the Perfume Ylang-Ylang," contains merely a confirmation of its derivation from Cananga.

Cananga odorata is a tree growing to the height of about sixty feet, having few but profusely ramified branches. The bifarious, short-petioled, lanceolate-acuminate leaves are to 18 *cm.* long and about 7 *cm.* broad; their surface is somewhat rough, but at the lower surface slightly pubescent along the ribs. The handsome and conspicuous flowers are in fascicles, up to 4, upon short pedicels. The sepals of the three-lobed, coriaceous calyx are finally recurvate. The six lanceolate petals soon spread out flat and grow to a length of 7 *cm.* and a breadth of about 12 *mm.* They are longitudinally veined, of greenish color, but dark-brown when dried. The somewhat campanulate, pendulous flowers present a handsome aspect, though the floral splendor of other nearly related plants is much more prominent. The filaments are numerous, and the somewhat elevated receptacle is slightly depressed at the vertex. The green fruit (berry) consists of 15 to 20 rather long-pedicelled single capels, including 3 to 8 seeds arranged in 2 rows. The fruits are situated in hemispheric umbels, or arise from the nodes of leafless twigs. The flesh of the fruit is sweetish and aromatic, and the flowers possess an exceeding fragrance which is frequently compared with that of hyacinth, narcissus, and clove.

According to Hooker and Thomson, and according to Bentham and Hooker,[13] *Cananga odorata* is the only species of this genus; the plants formerly confounded with it, under the name of Unona or Uvaria, some of which likewise possess fragrant flowers, are now assigned to the latter two genera. Cananga differs from Uvaria by the valvate sepals, and from Unona by the biseriate arrangement of the seeds.

Cananga odorata is distributed over the whole of Southern Asia, but principally as a cultivated plant. In its wild state, the tree grows to a much greater height, but the flowers are, according to Blume, almost odorless. The habit of Cananga resembles that of *Michelia Champaca* L.,[14] a tree of the natural family Magnoliaceæ, native of India, which is an exceedingly great favorite on account of the very pleasant odor of its yellow flowers, and which was highly prized already in ancient times by the Hindus. Among the fragrant flowers which are preferred to all others by the Javanese—who are, in this respect, very dainty—the most highly valued are those of "tjempaka" (Michelia Champaca), and of "kenangga wangi" (Cananga odorata).

I do not know whether the oil of Cananga was already prepared in former times. In Europe, it seems to have made its first appearance in 1864, and its exceedingly fine aroma found ample recognition both at London and at Paris.[15] At first, only very small quantities were imported from the Indian Archipelago, but larger instalments were soon received from Manila, where German pharmacists engaged in the distillation of the oil.[16]

Oscar Reymann and Adolph Roensch, of Manila, exhibited Ylang-Ylang oil at Paris, in 1878;[17] the former had also added the flowers of Cananga. The accompanying oil of Michelia Champaca equals the former in aroma. It is difficult to judge of the extent to which the Cananga oil has found favor, but a somewhat increased demand appears to have been the cause of its gradual decline in price; at present, it may be purchased in Germany for about 600 marks (ab. 150 dollars) the kilo.[18] As the Cananga tree may be easily cultivated in all warm climates, and, as its flowers probably everywhere have the same pleasant aroma, the oil ought to be obtainable at a much lower price, although the yield is comparatively small.[19]

Possibly the tree might flourish in Algiers, where a good many plants yielding perfumes are already being cultivated.

According to Guibourt,[20] the so-called Macassar oil, which has been a favorite hair oil in Europe at least some ten or twenty years ago, is cocoa-nut oil, flavored by digestion with the flowers of Cananga odorata and Michelia Champaca, and colored yellow by turmeric. Such compounds have been in use in India from ancient times.

The name Cananga is met with in Germany already in earlier times. An Oleum destillatum Canangæ is mentioned by the Leipsic apothecary, John Heinrich Linck, among "some new exotica" in the work quoted in the foot-note.[21] But since the fruit obtained from the same tree and sent with the Cananga oil is described by Linck as extremely bitter, it is not probable that this can refer to Cananga odorata, the fruit of which is expressly described by Rumph and

[12] "Ueber den Ursprung des Parfüms Ylang-Ylang." *Just's Botan. Jahresbericht*, 1875, 973.

[13] *Genera Plantarum*, I. (1862), 24.

[14] A fine illustration of this is likewise found in Blume's *Flora Javæ*, III., Magnoliaceæ, tab. I.

[15] *Jahresbericht der Pharm.* von Wiggers and Husemann, 1867, 422.

[16] Ibidem, 1868, 166.

[17] Also at Philadelphia, in 1876.—ED. N. R.

[18] According to information received from Mr. Reymann, about 200 kilos are annually consumed at Paris, Nizza, and Grasse; about 50 kilos in London, and about the same quantity in Germany (Leipzig, Berlin, Frankfurt).

[19] 25 grams of oil from 5 kilos of the flowers, according to Reymann.

[20] *Histoire naturelle des Drogues simples*, III. (1850), 675.

[21] *Sammlung von Natur- und Medicin-, wie auch hierzu gehörigen Kunst- und Literatur-Geschichten so sich Anno 1719 in Schlesien und andern Ländern begeben.* Leipzig und Budissin, 1719.

Blume as sweetish. An Oleum Canangæ, "Camelstrohöl," is also mentioned in the tax-list of Bremen and Verden.[22] It is undecided whether this oil was really derived from "Camelstroh" (camel's straw), that is, Andropogon lanifer, a handsome gramineous plant.

Chemically, the oil of Cananga has become interesting by the fact, discovered by Gal, that it contains benzoic acid, no doubt in form of a compound ether.[23] So far as I just now can recall the literature of ethereal oils, this occurrence of a benzoic ether in a natural product is a solitary instance,[24] although it cannot cause any surprise, and will probably be proven in other products hereafter. As I was desirous to inform myself of the correctness of this statement by personal proof, I requested Mr. Adolf Convert, *Cand. Pharm.* (of Frankfurt-on-the-Main), to examine the oil in this direction.

The oil did not affect litmus paper moistened with alcohol; at 170° C. a small portion distilled over, but the thermometer gradually rose to 290° C., and at a still higher temperature the oil was decomposed. As the portions passing over below 290° had a strongly acid reaction, the presence of compound ethers was very probable. Mr. Convert then boiled 10 grams of the oil with 20 grams of alcohol and 1 gram of potassa, during one day, in a flask provided with an upright condenser. The alcohol was removed by distillation, the residue supersaturated with dil. sulphuric acid, and subjected to distillation with much water, until the distillate almost ceased to have an acid reaction. The distillate was then neutralized with barium carbonate, and the filtrate concentrated, whereupon it yielded crystals which were recognized as almost pure acetate. The acid residue containing the potassium sulphate was shaken with ether, and the ethereal solution, after being evaporated, left a crystalline mass of an acid reaction, which was colored violet by ferric chloride. This reaction, probably ascribable to the presence of a phenol, failed to make its appearance after the mass had been recrystallized from boiling water. The aqueous solution of the purified crystals then gave only a small flesh-colored precipitate with ferric chloride. The crystals, forming small lamellæ, melted at 120°. To confirm the presence of benzoic acid, Mr. Convert boiled them with water and oxide of silver, and dried the minute crystals obtained from the cooled filtrate over sulphuric acid. 0.0312 gm. of them yielded, on combustion, 0.0147 gm., or 47.1 per cent of silver. Benzoate of silver contains 46.6 per cent of metal; hence the identity of the crystals with benzoate of silver is proved. The separation of the alcohol-like constituent, existing in form of an apparently inconsiderable quantity of a benzoic ether, requires more Ylang oil than was at our disposal.

Besides a benzoic ether, and probably a phenol, the oil gives indications of the presence of an aldehyde, or ketone, since, on shaking it with acid sulphite of sodium, I observed the formation of a very small quantity of crystals. Like benzoic acid, no doubt the acetic acid is also contained in the oil in form of a compound ether.

[22] Flückiger, *Documente zur Geschichte der Pharmacie*. Halle, 1876, 93.

[23] *Comptes rendus*, 76 (1873), 1428, and thence in *Pharm. Journ.*, IV. (1873), 28. Also in *Jahresbericht* von Wiggers und Husemann, 1873, 431.

[24] With the exception of balsam of Peru and balsam of Tolu.

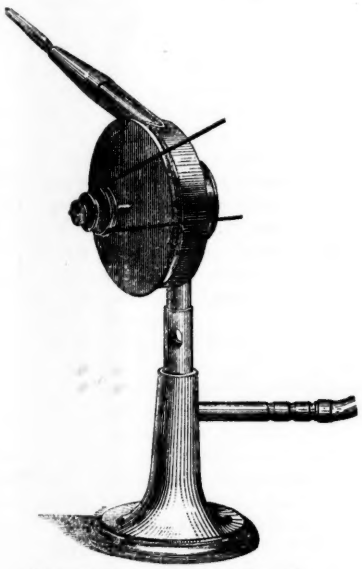
Azor Thurston

The Alaska Indian Doctor.

THE Indian doctor is called *ischt* in his own tongue, and *shaman* in the Russian. When a male child is born with a curl-lock of hair, it is a sign that he is to be a doctor. He is carefully fostered by his parents and friends. His hair is not cut nor combed, nor is he allowed to eat clams, crabs, or any beach food. It is seldom that an infant is born with the desired curly lock. Years ago, the credulous were deceived by designing relatives, who would present the child with a curl made by hand. It is seldom that a boy with a genuine curl makes his appearance. There are others who aspire to the position and influence of doctor. When one dies, an Indian will go upon the roof and call for the yake or demon who dwelt in the body, which is now lying in state and surrounded by mourners. If he comes, he will be apt to enter into one of the young men who are standing around the corpse. He falls as if he were shot dead. This is a sign that the old doctor's demon has entered into the man. He is taken off to one part of the house and covered with a blanket. He pretends to be wholly unconscious. There is a tacit understanding between the man who calls the yake and the one into whom he is supposed to enter. Sometimes an Indian falls so violently as to injure his head. This has its proper effect upon the bystanders. Others who have neither curly hair, nor are possessed, become doctors. Often a nephew, the doctor's sister's son, is the favored one. All candidates must endure the test. When the proper time arrives, the person who is to be initiated goes to the tomb of a doctor whom he chooses as a sort of patron. He is attended by two watches of relatives, four in each. The test is an absolute fast for eight days. He sleeps one or two nights in the dead-house, and the watchers are to see that he does not break his fast. He is allowed the use of tobacco. While he is fasting, he makes up his songs which he will sing when called upon to cure a sick person. His guard learn the same song, for they are to be his attendants in the future when he practises his rites.—J. G. BRADY in *The Herald and Presbyter*.

A New Gas Blast Lamp and Blowpipe.

THE principal feature of this gas blast is a centrifugal fan about three inches in diameter, into the box or casing of which mixed air and gas pass from an arrangement precisely like a Bunsen burner. By the revolution of the fan, the air and gas are most perfectly mixed and projected through a nozzle of any desired form or size, producing a blowpipe flame of remarkable steadiness and intensity. The casing of the fan turns freely upon its axis, so that the flame may be used at any angle. The supply of air is regulated by a ring on the tube at base of the lamp. By varying the amount of gas and air, the flame may be changed from a reducing one to an oxidizing, or vice versa, at will.



Morrell's Gas Blast-Lamp and Blowpipe.

The range of temperature which can be produced by the flame of this blast lamp is very wide, as an intense heat sufficient to melt a fine platinum wire, and higher than can be obtained from any other gas blast, can be easily reached, or it may be reduced to about the heat of an ordinary Bunsen burner. For ignition or fusion in crucible, the flame is very much superior to that of the usually used Bunsen's blast lamp, on account of its solidity, the air and gas being thoroughly mixed before ignition. The same quality renders it superior for blowpipe work, giving an atmosphere, rather than a point of oxidation or reduction. The flame may be driven through an opening not larger than a pin hole, making a jet perfectly suited to jewellers' work and soldering.

The power required to operate this blast lamp is extremely small, there being scarcely any friction either of the running parts or of the gases themselves.

The great advantage possessed by this improved gas blast in obviating the use of the troublesome and laborious foot bellows, as well as its more constant blast, will commend it to all who have occasion to use a more intense degree of heat than can be obtained from the Bunsen burner or gas stove. It will be found to be a great time and labor saver to all chemists in making ignitions or fusions; and also to metal-workers in brazing, hard soldering, etc.

Mr. T. T. Morrell, chemist of the Cambria Iron Works, Johnstown, Pa., is the inventor and patentee of this very useful device, and Messrs. J. & H. Berge, Nos. 191 Greenwich street and 95 John street, New York, are the sole manufacturers.

Messrs. Berge sell, at a small cost, a small and economical steam motor to run the above-mentioned lamp.

Treatment of Malodorous Feet.

IN a communication to the *British Medical Journal*, Sept. 18th, Dr. George Thin gives some hints on the above subject, which seem practical. Heretofore, treatment, such as that recommended by Hebra, viz., of enveloping the soles of the feet in lead plaster, and putting the patient to bed for eight or twelve days, is objectionable. Dr. Thin concludes, after some recent investigations, that the fluid from the soles of the feet is not pure sweat, the faintly alkaline reaction showing a serous discharge from the eczema accompanying the local hyperidrosis. An examination of the fluid from the sole of the stocking of one patient showed it to be teeming with bacteria forms, the nature of which he carefully investigated. The rapid development of bacteria in the fluid which exudes from the soles is doubtless favored by the alkaline reaction produced by the mixture of serous exudation with sweat.

The treatment instituted in this case is as simple as it has been effective. The stockings are changed twice daily, and the stocking-feet are placed for some hours in a jar containing a saturated solution of boracic acid. They are then dried, and are fit for wear again, if it be desired. The boracic acid effectually destroys the smell. But to kill the bacteria in the stocking is not enough. The leather in the bottom of the boot is wet and sodden, and smells as vilely as the stocking. This difficulty is got over by the use of cork soles. The patient is directed to get half a dozen, which she finds sufficient. A pair must only be worn one day unchanged; at night they are placed in the boracic jar, and are put aside the next day to dry. If these directions be accurately carried out, the evil smell is perfectly destroyed.

The boracic acid solution is an excellent ap-

plication to the painful skin in these cases. When the tender skin of the soles is washed with it, a sensation of coolness succeeds the feeling of heat and tension, which are the usual accompaniments of the eczematous condition associated with the smell, and the skin becomes harder and loses its abnormal redness.

Instruments for Urethral Injection.

THERE is much fault to be found with the forms of urethral syringes in common use, and which most apothecaries keep in stock. This is doubtless owing to the fact that a large proportion of the cases of urethritis never come under the observation of a physician, and that few physicians pay much attention to the selection of a proper instrument. In the last (4th) edition of Bumstead's and Taylor's work on Venereal Diseases, p. 48 *et seq.*, considerable space is devoted to a description of proper and improper forms of urethral syringes. The authors speak as follows:

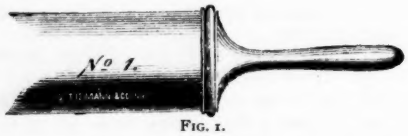


FIG. 1.

"Glass syringes, if well made, answer every purpose, but as found in the shops, they are apt to be unequal in calibre in different parts of the cylinder, the wadding of the piston contracts in drying, and a portion of the fluid fails to be thrown out, as is seen by its overflow when the syringe is filled a second time. For these reasons

FIG. 2.

I never advise a patient to purchase an ordinary glass syringe, knowing that it will probably give him much annoyance, and perhaps prevent his deriving much benefit from treatment. We have an excellent substitute in the hard-rubber syringes, which can be obtained at the druggists.

"'No. 1' (Fig. 1) is the one generally sold when

FIG. 3.

no special form is directed by the surgeon, but its nozzle is objectionable: it is unnecessarily long, its point is apt to irritate the internal wall of the canal, and it is not well adapted to fully distend the meatus.

"'No. 1 A' (Fig. 2) is preferable. The abrupt shoulder near the point is well adapted to fill the meatus, and the short and rounded end cannot abrade the sensitive mucous membrane.

"Fig. 3 represents another excellent form, and one which is recommended by Prof. Sigmund, of Vienna. I find a figure of the same in the work of Dr. H. A. Hacker, 'Die Blennorrhöen der Genitalien,' Erlangen, 1850.

"I know of no syringe, however, equally convenient to one recently introduced, and called by its inventor,* "The Peerless Syringe," which, in addition to a good nozzle, has the special advantage that it can be filled from any bottle. It is made of glass, and provided with a soft-rubber sleeve, by means of which it can be inserted, like a cork, in the mouth of the vial. This having been done, the vial is turned bottom up, and the syringe is filled by simply withdrawing the piston. A facetious patient has called it the 'Commercial Traveller's Pocket Companion.'"

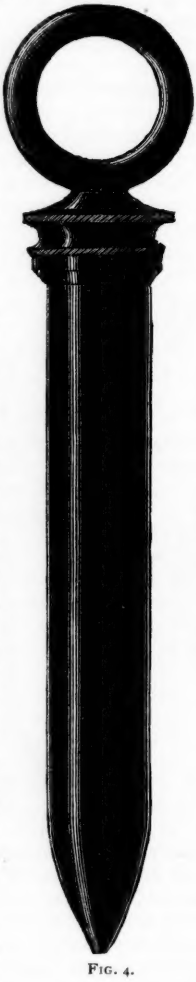


FIG. 4.

In the *Boston Med. and Surg. Jour.* for March 3d, Dr. Edward Wigglesworth, of Boston, calls attention to the mistake often made of using syringes of too small capacity, whereby the urethra fails to be fully distended so as to obliterate the folds, and strongly recommends the syringe referred to by Bumstead and Taylor (see Fig. 3). The price for these has heretofore been found too high, "especially for that large class which is able to pay for the acquisition of, but not for the treatment of, its urethritides." Dr. Wigglesworth has at length prevailed upon the Rubber Comb and Jewelry Co., 33 Mercer street, N. Y., to manufacture these syringes in the size and shape illustrated in the adjoining figure (Fig. 4), which can be supplied at a price which will admit of their being retailed for a dollar, or

*R. Van der Emde, Apothecary, 323 Bowery, N. Y. Manufactured and sold by C. Riessner & Co., 242 Pearl street, N. Y.

even less. The syringe is known by the title of the "'Royal' Excelsior 'P' Syringe," "which almost carries 'hyperbole to a satire,' but 'Royal' is the trade-mark of all the syringes of the company, excelsior (if not supreme) the syringe is, and 'P' is to be regarded, not as a paronomasia, but as a contraction which veils while it reveals."

FIG. 5.

In the same number of the journal referred to, Dr. W. Thornton Parker, of Plymouth, Mass., describes a soft-rubber nozzle, of the form shown in the adjoining illustration, which can be used with any ordinary form of syringe, and enables the urethra to be injected without pain. It is made of pure rubber, soft and pliable, about two and a half inches long, and of three sizes, corresponding to Nos. 13, 15, and 17 of the "American" catheter-scale.

The Physiological Effects of Quinoline.

FORMER investigations have shown that the cinchona alkaloids contain a group of atoms constituting a very interesting body of great permanence and basicity, which has received the name quinoline (chinoline). It has been obtained in various ways, either by distilling quinine or cinchonine with alkalies, or by other treatment of the cinchona alkaloids, but all these methods yield a product which is expensive in proportion to the value of the source it is derived from. Lately, however, Mr. Zd. Skraup has discovered a process by which quinoline may be obtained in any quantity from aniline (comp. NEW REM., 1880, 336), and should there be any considerable demand for it, it could hereafter be supplied at a very moderate price.

The genetic relationship between quinoline and the cinchona alkaloids having already been recognized, it is not surprising that this body should be suspected to possess properties antagonistic to fermentation and putrefaction, and also to lower the temperature of the body. Experiments in this direction, undertaken by Mr. Julius Donath, have proved the correctness of this supposition.

The quinoline which formed the basis of these experiments was obtained from H. Trommsdorff in Erfurt, and had been obtained from cinchonine. After it has been purified from other accompanying bases, by fractional distillation, it is converted into a crystalline hydrochlorate, by mixing 25 gm. of the base with 34 gm. of concentrated hydrochloric acid, whereby considerable heat is developed, and the mass assumes a darker color. By complete evaporation on the water-bath, a dark-brown, exceedingly hygroscopic syrup is obtained, solidifying in the desiccator to a tough, finely-crystalline mass, which is freed from mother-liquor by rapid pressing. The crystals are then dissolved in a little water, decolorized by animal charcoal, the solution concentrated to a small bulk and allowed to crystallize in the exsiccator. The crystals rapidly deliquesce on exposure to air, are rather easily soluble in 94% alcohol, but insoluble in ether. The aqueous solution retains an acid reaction even after a permanent milky opalescence of separated quinoline has been caused by dilute alkali. Solution of iodine in iodide of potassium produces a kermes-colored precipitate, much resembling that produced with quinine, which is quite distinctive even in a dilution of 1 to 500, and has a greenish fluorescence by reflected light.

Antipyretic Properties of Quinoline (in Animals).—The hypodermic injection of 0.24 gms. (4 grains) of hydrochlorate of quinoline, dissolved in 5 times the quantity of water, in a vigorous male rabbit of 1.5 kilos weight, produced a diminution of temperature of 1° C., lasting 2½ hours, and another time of 1.2° C., of equal duration. With a stronger dose (0.36 gm. or 6 grains) the reduction of temperature amounted to 1.5° C., the maximum being reached, in the former case, after ¾ of an hour, and in the latter case, after 1¼ hours. The reduction of temperature was combined with a diminution of respiration. In the first case the latter diminished, 1½ hours after the injection, to 98 per minute; in the latter, 1¾ hours after the injection, to 34, while in the normal condition of the rabbit its respiration cannot be counted directly. The larger dose (0.36 gm.) was already toxic, as the animal was downcast, breathed laboriously, and trembled convulsively in its hind-legs.

The intimate connection between respiration and circulation makes it probable that the rate of pulsation likewise decreased, though this has not yet been proved directly. Quinine, in large doses, likewise retards respiration and circulation. The retardation of respiration proceeds from the medulla oblongata and is proportional to the paralysis of the motor and reflex organs of the spinal marrow.

It is known of quinine and other agents capable of reducing the temperature, that this reduction is much smaller in a healthy individual than in one affected with fever. The same is probably the case with quinoline. (The author has not yet had any opportunity of testing quinoline in malarial fever, owing to the absence of this scourge in the district where he resides.)

Antiseptic Properties of Quinoline.—The author found that a 0.2 per cent solution of hydrochlorate of quinoline entirely prevented the putrefaction of urine, and of a 33 per cent solution of gelatin or glue, and it retarded the fermentation of milk-sugar. A 0.4 per cent solution completely prevents the putrefaction of blood, and greatly retards the coagulation of milk; finally,

in 1 per cent solution it destroys the coagulability of blood. With albumen it forms a compound coagulating at lower temperatures.—*Ber. d. Deutsch. Chem. Ges.*, 1881, 178.

Chian Turpentine.

THE following letter has been received by the editors of the *Répertoire de Pharmacie:* For some months past, a good deal has been heard about a product of our island, that had quite fallen into disuse, and which no one cared to gather, so much had the demand fallen off because a substitute for it had been found in Europe; I mean Chian turpentine.

As this product is destined to take a certain part in the treatment of cancer, according to some English physicians, permit me, sir, to give your readers a few interesting details, obtained on the spot, concerning the turpentine tree and its product.

The turpentine tree (*Pistacia Terebinthus* L.) has existed in our island for many centuries, judging from the enormous dimensions of some of these trees, compared, too, with their slow rate of growth. The trunks of some measure from 4 to 5 meters in circumference, and their heights vary from 15 to 20 meters. On my own land there is an enormous tree, by far the largest on the island, the circumference of its trunk being 6 meters. Many of these great trees have been used in the construction of mills, presses, etc., on account of the hardness of their wood. It is in the vicinity of the town and in three or four neighboring villages that these trees are found. To-day, at a careful estimate, there may be 1,500 trees capable of yielding 2,000 kilog. of turpentine, mixed with at least 30 per cent of foreign matter. There are no appliances for refining the product here, except the sieves through which it is passed to remove the pebbles and bits of wood which are found in it.

It is gathered from incisions made in the tree in June. Axes are used for this purpose, and the incision must be through the whole thickness of the bark. Through these outlets the turpentine falls to the foot of the tree, and mixes with the earth there. On its first appearance the turpentine is of a syrupy consistence, and is quite transparent, gradually it becomes more opaque, and of a yellowish-white color. It is at this period also that it gives off its characteristic odor most abundantly.

It is, however, not the product "turpentine" that is most esteemed by the natives, but the fruit of the tree, a kind of drupe disposed in clusters. The fruit is improved by the incisions made in the tree for the escape of the turpentine, otherwise the resin, having no other outlet, would impregnate the former, hinder its complete development, and render it useless for the purposes for which it is cultivated. One circumstance worth noting is that, as soon as the fruit commences to ripen, the flow of turpentine completely ceases. This is towards August, the fruit is then green, it is gathered, dried in the sun, bruised, and a fine yellowish-green oil is drawn from it, which is soluble in ether. This oil is used for alimentary purposes, but rarely for illumination since the introduction of petroleum. It is mostly used in making sweet cakes, and often as a substitute for butter, in all cases where the latter is employed. I use it daily myself without perceiving any difference.

I may here be permitted to correct a slight mistake that has crept into several standard botanical works. It is therein stated that the inhabitants of this country extract from the fruit of the lentisc (*Pistacia Lentiscus* L., a well-known shrub growing on this island, from which Chian mastic is obtained) an alimentary and illuminating oil. This fruit has never been gathered for its oil within the memory of man. The lentisc has probably been thus mistaken for the turpentine tree.

For the last twenty years the gathering of turpentine has been almost abandoned, although the incisions in the trees have been regularly made, but the value was so small that proprietors did not care to collect it, and left it to run to waste. There were but a few pharmacists of Smyrna and the neighboring islands who took a small quantity for making medicinal plasters. An utterly insignificant quantity found its way into Europe. How is it then that, after so many years, it was found in Europe? The problem is easily explained—the greater part came from Venice. This is indubitable, and, lately, an English chemist, Mr. W. Martindale, in a communication to the Chemical Society of London, expressed doubts as to the authenticity of the turpentine used in the treatment of cancer. If turpentine can really somewhat relieve this disease, and if this treatment is generally accepted in Europe, I much fear you will only obtain substitutions of very inferior quality to the turpentine produced in our island.

This year the Chians have been surprised by an extensive demand for this product, from London in the first place, and secondly from Vienna, and the proprietors, although but poorly provided at the moment, sent away nearly 600 kilog. Paris has not yet made any demand. Yours, etc.,

DR. STIEPOWICH.

CHIO, TURKEY.

The Administration of Medicine in Drop Doses.—J. B. MOORE calls attention to the dangers and disadvantages of employing this mode of dispensing, and advises its discontinuance, when practicable, and the substitution for it of mixtures having simple elixir, syrup of orange, Curaçoa cordial, compound tincture of cardamoms and syrup, lemon syrup, etc., as vehicles.

He calls special attention of physicians "to the great excellence of the 'simple elixir' as a vehicle for all bitter tonics, many of the salts and alkaloids, and as an agreeable and truly elegant flavoring to add to various unpalatable mixtures, as well as a very excellent vehicle for many of the more potent remedies.—*Druggist's Cir.*

[ORIGINAL COMMUNICATION.]

ON VASELINE AND PETROLEUM PRODUCTS.*

BY SAMUEL A. D. SHEPPARD.

THE very sound of the word petroleum brings to the mind of every intelligent American a perfect flood of thoughts. The fortunes that have been made and lost in oil stocks, the displacement of whale oil by kerosene as a means of illumination, paraffine candles as a substitute for wax and tallow, the immense quantities of the petroleum lubricating oils used in every factory and machine shop of the land; in short, the immeasurable uses of petroleum and its products, the place it almost instantly claimed in the industries of modern civilization, and the fact that it not only made good that claim, but that it is steadily advancing and never retreating, makes us feel that the discovery of petroleum ranks among the greatest in the history of our world.

Most people regard petroleum as a purely American product, and no wonder, when, besides the enormous consumption of it in the United States, we export some 25,000,000 gallons a month of refined petroleum. But probably our monopoly of this great industry will not continue much longer, for "they have struck oil" elsewhere; indeed, in several other countries, though Russia seems likely to be our first great rival. This fact may hurt our national pride a little, yet it is a pleasant one to contemplate when we view it from a higher stand-point, viz.: as citizens of the world.

As pharmacists, we are particularly interested in that product of petroleum that will furnish us a base for ointments. There are a number of such in our markets. They have long ago commended themselves to intelligent pharmacists, being odorless, tasteless, of a good color, most excellent emollients, and especially useful because not liable to become rancid, as does lard, which so often causes irritation instead of what the physician desires, namely, a soothing application.

The articles principally known are cosmoline, vaseline, deodoroline, petroline, and fluorine, the name of which latter has recently been changed to saxoline. It is more particularly to the history, mode of manufacture, etc., of these articles that I call attention at present.

The first thought of almost every American, when he finds a good thing, seems to be: "*I must get a patent for this.*" So we find petroleum just buried, almost out of reach, under a pile of Patent-Office rubbish. At any rate, to study petroleum ointment, we must consult the Patent-Office records, first and foremost.

Among the patents which apply directly or indirectly to the purification of petroleum and its products, the following have a bearing upon the subject at present under consideration:

1. British patent, No. 11,960, issued in 1847 to Charles Blatchford Mansfield, of Cambridge, England, in the specifications of which mention is made of the purification of petroleum oils by filtration through animal charcoal. This patent was introduced chiefly to cover improvements on kerosene lamp fixtures, but it is very extended in its scope, occupying more than fifty pages in the Patent-Office report. It did not apply to the United States, and ran out in fourteen years (Nov. 12th, 1861); and even if the use of bone-black for decolorizing and deodoring were patentable, for the above reason alone, the application of charcoal to the purification of petroleum has become public property.

2. United States patent, No. 49,230, Aug. 8th, 1865. Robert A. Chesebrough, New York. Covers a special apparatus for filtering hydrocarbon or other oils by means of heat produced by steam coils inside and outside of the apparatus.

3. U. S. patent, No. 49,502, Aug. 22d, 1865. Robert A. Chesebrough, New York. Covers the use of bone-black for purifying coal oil by filtration.

4. U. S. patent, No. 56,179, July 10th, 1866. Robert A. Chesebrough, New York. Covers the use of *hot* bone-black.

5. U. S. patent, No. 87,157, Feb. 23d, 1869. Hiram B. Everest, Rochester, N. Y. Covers the manufacture of "improved vacuum oil," by introducing the residue of petroleum left after the distillation of the lighter products, until it begins to cake, into a vacuum still, and passing superheated steam through it, whereby the lighter paraffin oils are driven over, and the residue is deprived of bad odor.

6. U. S. patent, No. 90,284, May 18th, 1869. Joshua Merrill, Boston. Covers (Downers') neutral oil and spindle oil.

7. U. S. patent, No. 99,500, Feb. 1st, 1870. Charles Toppan, Wakefield, Mass. Covers purification of commercial vacuum oil by filtration through charcoal, obtaining "amorphous paraffin," also a second product of lesser purity.

8. U. S. patent, No. 99,975, Feb. 15th, 1870. Herbert W. C. Tweddle, Pittsburg, Pa. Producing paraffin by exhaustive distillation at low temperature, by the use of steam in a vacuum still—"neutral topaz oil."

9. U. S. patent, No. 111,376, Jan. 31st, 1871. John W. Osborne, Brooklyn, N. Y. Combination of paraffin with other oils, making an emollient for the hands, etc.

10. U. S. patent, No. 127,568, June 4th, 1872. Robert A. Chesebrough. Covers the manufacture of vaseline.

Of all these patents and many others that bear indirectly on the subject under consideration, the most important are those of Robert A.

* Abstract of a paper read by the author at a pharmaceutical meeting of the Massachusetts College of Pharmacy, at Boston, Dec. 14th, 1880.

Chesebrough, of New York, whose enterprise, supplemented by that of Messrs. Colgate & Co., has made vaseline in many places to be *the* petroleum ointment. Yet, though vaseline is a very nice article, there are others which are equally good, and for some purposes even better.

Now the question arises, Are these patents valid? Of course, Mr. Chesebrough owns the name vaseline, and where his patents cover new ideas in the manufacture of machinery, etc., they are valid, but the power of animal charcoal, otherwise called bone-black, to deodorize and decolorize organic substances has been known for too many ages to be at this time in the world's history patentable, even when applied to so American an article as petroleum; nor does it seem to be possible to patent the idea of keeping a thick oil in a fluid condition if you would filter it. It would be hard to find even an idiot who would try to filter cold lard.

The use of steam coils, inside or outside, for heating is certainly not a new and patentable idea, nor is the use of the vacuum process; and as these are the vital points in Chesebrough's patent, they seem to collapse at a touch, yet a suit at law has been going on for some years between Chesebrough as plaintiff, and Houghton & Co., defendants, on this subject, Houghton & Co. taking as defence the same ideas just stated, but still the suit goes on.

It would thus seem that all these things should be as free as air to all men who have skill and means to make them; and, really, I think we have less to fear from the decision of the courts than we have from a combination of all the manufacturers, or a freezing out of the smaller by the larger dealers, as has been done by the Standard Oil Company, which now, and for a long time, controls the petroleum market.

The main facts that we have considered in the manufacture of vaseline can probably be applied to all the other similar articles now in the market; that is, they are the purified residuum of petroleum. The question now arises, Can we make a good substitute for these preparations by mixing paraffin wax and neutral paraffin oil? This is a matter that has been very thoroughly investigated. In 1873–74, Drs. A. W. Miller and J. L. Lansburger, in Philadelphia, worked up the subject. In their papers in the *Amer. Jour. Pharm.* of those years they claim a mixture to be a good substitute, but further examinations and the test of time show that these mixtures will not remain homogenous, nor are so satisfactory in many ways.

Mr. Chesebrough claims that, while vaseline is harmless taken internally, any distillate like paraffin and paraffin oils, of which such a mixture must be made, are poisonous internally and harmful externally. He claims that there is no paraffin in vaseline, that paraffin is a product formed in the process of distillation.

If, as seems to be the result of all our researches concerning this article, the fact is that we are to use this purified residuum in future very largely, it is desirable to know as much as we can about the different articles of commerce and about their capabilities.

It is also desirable that it should be in the Pharmacopœia. In 1878, I was informed by Mr. Charles Toppan that he had discovered that the residuum could be purified by throwing it in spray into a spray of superheated steam. This fact was published on page 263, *Am. Jour. Pharm.*, 1878, in order to make it public, and thus forestall any patent. This was done with the full consent of Mr. Toppan. If I am rightly informed, this is the process used at Binghamton in the manufacture of "Petrolina." I have not been able in time to obtain a sample of the article put on the market by Mr. Stearns, of Detroit—saxoline, as he now calls it.

Of the articles that I have examined, in order to test their desirability as a base for ointment, deodoroline, as lately put on the market by Weeks & Potter, seems to me the best. As it was at first, it was *not* good; neither was their dermoline so good as cosmoline, etc., but deodoroline as now sold has the best melting point, is firmer, and, I think, is about as odorless and tasteless as the article is likely ever to be made. The taste of these articles is one of the readiest and surest ways of testing them.

The melting point of vaseline is about 85° F.
The melting point of cosmoline is ab. 94° F.
The melting point of petrolina is ab. 102° F.
The melting point of deodoroline is ab. 111° F.

In speaking of deodoroline, I would not disparage these other excellent preparations. They are all good, and it is highly probable that when a standard for them shall have been fixed by the Pharmacopœia authorities, they will all be made to conform to such standard.

As to the insertion of the article into the Pharmacopœia, it is needless to say that for some years such an idea has been entertained. And now that the Committee of Final Revision are in the midst of their labors, we can say with surety that it will have a place there.

The deliberations of the committee, however, as to the proper name that should be given it and as to the most suitable melting point, have not yet reached such a point that any definite information thereon could be given.

The subject of petroleum ointment is certainly a very interesting study, and there can be no doubt that it is destined, in the near future, to have a very prominent place in every pharmacy and manufactory of pharmaceutical preparations.

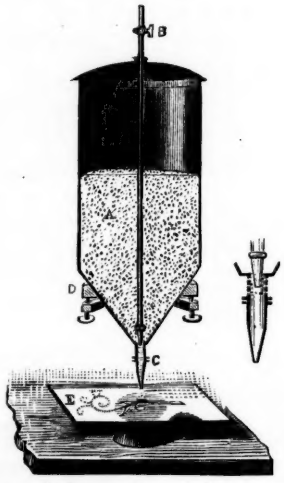
Oil of Wintergreen is used as a remedy in purulent cystitis by M. Pérur, a French physician, as follows:

Oil of wintergreen.....	fl. ʒ 1½	or gm. 6.00
Tr. quillaya saponaria....	fl. ʒ 1	or gm. 30.00
Water.....	fl. ʒ 3½	or gm. 100.00

It is employed as an injection into the bladder and also as a dressing for wounds, etc.

An Inexpensive Sand-Blast Apparatus for Engraving Labels, Etc.

WELL-DRIED sand, contained in the cylindrical vessel *A*, is allowed to flow in a continuous stream through the tube *C*, the length and inclination of which can be altered at will, so as to regulate the fall of the sand. A tube carrying a current of air or steam terminates just above this spout, in a nozzle containing a series of fine holes. The sand, urged on by the jet, is thrown violently against the glass plate *E*, or other body placed within its range, and thus exerts an abrading action. By varying the quantity of the sand, the volume and the velocity of the current,



An Inexpensive Sand-Blast.

as well as the diameter of the jet, more or less rapid effects are produced. Holes may be drilled in glass, and in substances much harder than glass, by means of this apparatus. In engraving on glass, very little pressure is needed, the current from the bellows of an enameller's lamp being quite sufficient. In this way, the divisions on graduated tubes, the labels on bottles, etc., can be easily engraved in laboratories with but little trouble. The portions of the glass which are to remain clear are covered with paper, or with an elastic varnish, these substances being sufficient protection against the abrading action of the sand.—*Scient. Amer.*

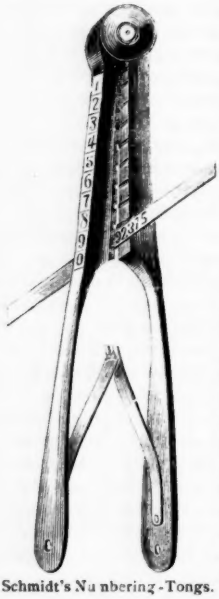
The Assay of Glycerin.

THE separation and estimation of glycerin, in commercial liquids, is not infrequently an important factor in deciding upon their quality. It is now pretty generally settled that the best solvent to be used in the separation of glycerin is a mixture of two volumes of absolute alcohol and one volume of water-washed ether. In a paper by Prof. A. B. Prescott, published in this journal (December, 1878, p. 354), the application of this method is shown to yield very accurate results. Prof. Prescott there mentions, also, the process proposed by E. Reichardt, which consists in treating the mixture containing the glycerin with slaked lime, evaporating to dryness, dissolving out the glycerin with boiling 90% alcohol, evaporating the alcohol, and weighing the residue as glycerin. This is, however, not sufficiently pure, as Prof. Prescott states, and should be again treated with a mixture of absolute alcohol (2 vols.) and washed ether (1 vol.), when the residue left, after their evaporation, will furnish pure glycerin. Mr. Friedrich Clausnizer, in a paper on the assay of glycerin in beer,* after discussing the different methods heretofore proposed, and pointing out their various sources of error, recommends certain modifications in the above process, and advises the employment of a displacement apparatus for the more complete extraction of the glycerin from the mass. The details of the process are as follows:

50 cc. of the liquid (beer, etc.) are warmed in a tared capsule with glass rod. As soon as any carbonic acid gas present has escaped, about 3 grams of slaked lime are added, the whole evaporated to a syrupy consistence, and, after the addition of about 10 grams of coarsely-powdered marble, and under repeated stirring and breaking-up of lumps, completely dried, until the residue is hard. The capsule is again weighed, its contents reduced to powder, and a weighed portion of it ($\frac{2}{3}$ to $\frac{3}{4}$) extracted in a displacement apparatus, with 20 cc. of 90% alcohol, during 4–6 hours. The alcoholic extract, amounting to about 15 cc., is allowed to cool, and afterwards treated with 25 cc. of anhydrous ether. The insoluble matter is allowed to subside, by setting aside for 1 hour, the liquid passed through a small filter into a small weighed flask, and the residue with filter washed with a mixture of absolute alcohol and ether (2:3). The almost colorless filtrate is deprived of the volatile menstruum by gently warming the flask, in an inclined position, on the water-bath. Finally, the residuary glycerin is dried, in the lightly-covered flask, between 100° and 110° C., for about 2 hours, and until it loses no more than 2 milligrams between two successive weighings. In ordinary cases, 2 to 4 hours of drying are required; when much glycerin was present, 4 to 6 hours. Since the menstruum employed is apt to dissolve minute quantities of saline bodies, the latter may be determined, when great accuracy is required. For this purpose, the residuary glycerin is treated with a little water, the solution transferred to a

* *Zeitschrift f. analyt. Chemie*, 1881, 80.

weighed platinum capsule, evaporated, and the residue dried and ignited. The extraction apparatus recommended by Mr. Clausnizer is a modification of a familiar form, based upon the principle of the intermittent fountain. It may be constructed by any one who has a little practice in glass-blowing. It consists of an outer tube, with narrowed neck and obliquely-cut end, and an inner narrower tube, the bottom of which has been drawn out and joined to a narrow glass tube, bent upwards and again passing downwards, as shown in the figure. The material to be exhausted is inclosed in a cylindrical roll, made of filter-paper folded at the bottom, and this is made to rest upon a small perforated disk of tin, placed in the bottom of the tube. The vapors arising from the flask pass up in the interval between the two glass tubes, and, after being condensed, fall upon the material in the inner tube. As soon as the liquid in the latter stands higher than the percolate in the upward bend of the lateral tube, the latter acts as a siphon, and partially empties the contents of the displacement tube. The dimensions of the different parts given by the author are as follows: Exterior tube, wider portion, 200–220 millimeters long, 22–23 *mm.* calibre; narrower portion, 60–80 *mm.* long, 6–7 *mm.* calibre; inner tube, 120–130 *mm.* long, 10–12 *mm.* calibre; siphon tube, 1–1.5 *mm.* calibre.



Schmidt's Numbering-Tongs.

Numbering-Tongs.

It is often desirable to produce permanent tags, containing numbers, to attach to various objects. A very simple apparatus for making such numbered tags is the numbering-tongs of F. W. Schmidt, in Doebeln (Saxony, Germany), German patent No. 4,538. The accompanying figure shows it in one-third of its natural size. It is provided at the interior of one of the shanks with a series of raised steel-dies, of which the corresponding numbers are marked at the upper surface as a guide to the eye. The best material to stamp them on is thin sheet-lead, in strips of proper width.

Teacher: "Why did Moses' mother hide him among the reeds?" Pupil: "Because she didn't want to have him vaccinated."

[ORIGINAL COMMUNICATION.]

A SIMPLE RAPID FILTERING APPARATUS.

I AM using in the laboratory of the Massachusetts College of Pharmacy, a very simple method of rapid filtration, for the washing of precipitates, etc., which might be of use to some of the readers of NEW REMEDIES.

I can, in a very few minutes, with the sharp corner of a file, wet with a saturated solution of camphor in oil of turpentine, bore through the side at the point A in Fig. 1, of an ordinary 5-pint or larger packing bottle. I enlarge the hole, with a large round file, to about the size of my little finger; a file wet with the above solution cutting glass as easily as it would very soft brass. Through the hole I force a piece of thick-walled rubber tube about an inch long, and through the bore of this a piece of glass tube with a short end bent at right angle like B in Fig. 1. This makes a water-tight elastic joint with the bottle, by which I connect a piece of rubber tube some six feet long. The bottle having a funnel fitted into its neck through a tightly-fitted stopple, as shown in Fig. 1, and filled with water, which is allowed to run off through the rubber tube into any receptacle placed below, makes such a simple, inexpensive aspirator as can be improvised in any laboratory in a very few minutes.

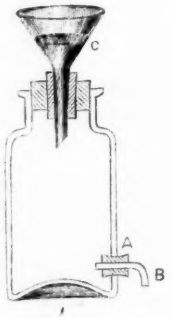


FIG. 1.

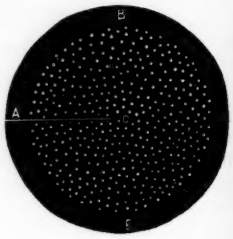


FIG. 2.

To prevent the bursting of the filter-paper through the pressure, it is supported in the funnel by a tinfoil cone. Several of these can be made at a time in the following simple manner: Upon several thicknesses of tinfoil is laid a card, having drawn upon it a circle two inches in diameter, like Fig. 2. The circumference, central point, and several lines of radial dots are then pricked through the card and the foil beneath. The circle thus pricked out is then cut out with scissors, the several thicknesses all together. The radius A C is then cut through them. Each of the circles of foil can then be formed into a cone by bending the foil carefully round at the central point C till the point A is just over its opposite point D. The other half is then carefully folded round outside of this.

This makes it into a cone of double thickness of foil, with an apex of just 60°. In fitting it into the funnel, it can be moulded a little more or less tightly, so as to be made just to fit the funnel; be its angle a little less or more than 60°. A tinfoil cone made in this manner serves just as well as a more expensive one of platinum, whenever it is not acted upon by the fluid filtered, or where it is of no consequence if it is, as the filtrate is not to be used.

By the use of this simple, inexpensive piece of apparatus, a filtration is accomplished in about one-fiftieth of the time consumed with the simple funnel alone; the exact gain depending, of course, upon the relative length of the column of fluid in this apparatus, as compared with that in the simple funnel. Yours, very respectfully,

V. F. DAVENPORT, M.D.,
Professor of Analytical Chemistry.

MASSACHUSETTS COLLEGE OF PHARMACY,
BOSTON, MASS., Jan. 22d, 1881.

The Uses of Henna in Algiers.

THE name *Hennah** is given by the Arabs to a plant belonging to the order Lythraceæ (*Octandria monogynia*), the *Lawsonia inermis* of Linnæus. This shrub, well-known to the ancients, is very common throughout India, Cabul, and Persia, appears to be a native of Arabia, and to have been distributed by the Arabs into Turkey (Asiatic and European), Egypt, and along the coast of the Mediterranean. It is, however, rather uncommon in Algiers, and the bulk of the products derived from it are obtained from the East.

A considerable business is done in the leaves of this plant, which are collected in the green state and dried in the sun. An aqueous decoction made from the coarsely-powdered leaves gives, after a few hours, to objects to which it is applied a peculiar ruddy coloration, somewhat similar to that of red ochre, but not quite to so deep a tint, and this stain lasts for some three or four weeks. The flowers are remarkably fragrant, whether fresh or dry, and are particularly grateful at a distance. The leaves are in daily domestic use by nearly every tribe obeying the Mussulman law. The women use it for dyeing the palms of their hands and the soles of their feet, partly with the idea of enhancing their natural charms, as the Japanese will blacken their teeth and the Indians tattoo themselves. Henna is also used for staining the hair of children of both sexes, not only for beautifying purposes, but as a specific against the skin diseases so frequent in youth, especially when the hair is allowed to grow very long, as is the case with the young Arab girls, and with the boys until a certain age, when the head is shaved, leaving only a long tail from the crown. This custom of shaving the heads of boys is, however, not general; certain religious sects, amongst which the very widespread one of the Aissaonas (especially near Morocco) allow the *chevelure* of both sexes to grow long.

The indigenous Jews also adopted the use of henna for the same purposes as the Mussulmans, those only who have acquired French habits having abandoned it—at least, so far as using it for toilet purposes.

The peculiar reddish-brown stain of henna deepens the natural color of the hair, and to certain tribes, especially that of the Kabyles, whose hair is very fair, the effect of its coloration is more pronounced, often leading strangers who see it for the first time to believe the color natural.

On moistening the dried leaves, a slight odor is perceptible; their taste is bitter and faintly aromatic; they contain a red coloring matter, an essential oil, and tannin. A medicament prepared from them is employed by the Arabs in the treatment of wounds of all kinds, causing the skin to grow over and healing them very quickly. These effects are probably due to some exciting action of the essential oil, and to the astringent properties of the tannin. They use this remedy principally on horses, to heal wounds or sores caused by friction of the harness, or otherwise on a journey. Having stopped for a rest and unsaddled, they will apply a plaister of it, and continue their march without taking more thought of the wound, which, if it does not heal, at least does not extend, and causes less suffering to the horse. They also employ it as a means of preventing the opening of old wounds, where the hair has not grown over the scar; it closes up and hardens the tissues—in fact, tans the skin.

For similar reasons, the Arabs who can afford to indulge in the sport of gazelle hunting will give their horses a foot-bath of henna, especially if the animals are young, or have not taken great exercise for some time. There may be some analogy to this in the custom prevailing amongst Arabian women of staining the palms of the hands and the soles of their feet—it may render the skin less tender.

In India, a cosmetic is made by beating up the fresh leaves with catechu. Although a decoction of fresh leaves stains the skin, it does not appear to communicate its color to cloth.

Acids destroy the color, but alkalies and infusions of astringent vegetables deepen it.

The species *Lawsonia spinosa* is considered by Roxburgh to be nothing more than the *L. inermis* (or *alba*), grown on a dry sterile soil, causing it to be very thorny and the branches short and rigid.—*Répert. de Pharm.* and *Pharm. Journ.*, Dec. 25th, 1880.

* The old Arabic name of the plant is *hinnâ'(un)*, the *un* being only the termination of the nominative. In modern Arabic, the plant is called *thamar-ul-hinnâ'i*, "the hinna shrub," or vulgarly, *tamar hinnâ*. The leaves are also called *hinnâ*.—ED. N. R.

On Resorcin and Hydroquinone.

In our last volume (1880, p. 269, etc.) we gave an abstract of the investigations of Dr. Andeer, on the antiseptic and antifebrile action of resorcin, and we there also briefly explained its chemical constitution and relationship to hydroquinone and pyrocatechin. The following remarks, which are derived from several papers since published, may be considered as a supplement to that article.

The first experiments on the effects of the dihydroxylbenzols (that is the above three bodies) were instituted by Dr. L. Brieger, of Berlin, who found that all three possessed antifermentative as well as toxic properties. It suggested itself, therefore, to use them in place of phenol or carbolic acid, over which they had the advantage of not being caustic, and, therefore, of being capable of being applied in a very concentrated form, where carbolic acid would destroy tissues or occasion great pain. Among them the hydroquinone seemed to be specially valuable on account of its lesser toxic effects. This body gave especially favorable results in gonorrhœa. The pains usually accompanying every fresh gonorrhœa disappeared as soon as the gonorrhœal flow stopped, and the latter was quickly accomplished by using solutions of hydroquinone of 1–2%. But it was also employed successfully in infectious eye-diseases, such as blennorrhœa, etc., being particularly valuable, because it exercises no irritating action on the cornea. Resorcin yielded less favorable results; injections of solutions of this body in the urethra caused great pain without at all diminishing the flow.

While Dr. Andeer's experiments chiefly pointed out the usefulness of resorcin as an *antiseptic* (see New Rem., 1880, p. 291), it was shortly afterwards shown by Prof. Lichtheim, in Berne, that it is also a powerful antipyretic, which in magnitude of effect and certainty is in some respects even superior to quinine and salicylic acid. On giving to a patient in high fever a dose of 2 to 3 grams of resorcin, its effects are noticed after a few minutes: dizziness and buzzing in the ears, reddening of the face, lustre of the eyes, acceleration of breathing and also of pulse, but the latter irregularly. After 10 to 15 minutes the skin begins to become moist, gradually the secretion increases, and after about 15 minutes the patient is in a profuse perspiration. As soon as this appears, the before-mentioned symptoms of excitement disappear, and there ensues a rapid subsidence of the fever. The pulse decreases in frequency and the temperature falls, both being normal about one hour after the drug has been administered. The reduction of temperature amounts in such cases to about 3° C. and more, and the pulse is reduced by more than one-third But while resorcin thus exhibits more powerful effects than quinine and salicylic acid, it has the disadvantage that the duration of these effects is comparatively short. Yet even this drawback alone would not seriously interfere with its common use as an antipyretic, for a drug capable of rapidly causing the subsidence of fever, even for a comparatively short time, would be highly valuable. The real objection is that resorcin causes symptoms of excitement, which in some cases are very prominent. The patients become delirious, their utterances become partly inarticulate and unintelligible, and sometimes a slight convulsive tremor of the hands and fingers is noticed. But these symptoms pass rapidly away, though they are disagreeable enough to retard the employment of resorcin internally as an antipyretic.

These results were also obtained and confirmed by Dr. L. Brieger, particularly so far as resorcin is concerned. With hydroquinone the results were more favorable: doses of 0.2 grams of the latter were sufficient to reduce the temperature without producing excitement, but on raising the dose to 0.8 or 1.0 gram these symptoms made their appearance. The antifebrile effect of both resorcin and hydroquinone passes off rapidly in a short time. Hydroquinone has an advantage for hypodermic employment. Being entirely free from caustic properties, solutions of it produce no more pain or damage than injections of pure water. It is recommended to employ a 10% solution and to inject two hypodermic syringes full of this.—From *Pharmac. Zeitung*, 1880, No. 90, and *Schweiz. Wochensch. f. d. Pharm.*, 1880, No. 33.

The Alkaloids of Quebracho Bark.

(Abstract of a paper by Dr. O. Hesse, in *Berichte der Deutsch. Chem. Gesellsch.*, 1880, 2,308).

It has lately been stated by Wulfsberg,* that the alkaloid *aspidospermine* prepared by Fraude from the bark of *Aspidosperma quebracho* is identical with Hesse's paytine.†

This statement induced Dr. Hesse to make a comparison of the two alkaloids, in the course of which he discovered that the bark of *Aspidosperma quebracho* contains no paytine whatever, and that aspidospermine is totally different from this alkaloid.

But this examination led to another unexpected and interesting result. It is well known that the true quebracho bark has been found an efficient remedy in many cases of asthma; but Dr. Penzold, who could not find a proper therapeutical agreement between the properties of the bark and those of the alkaloid aspidospermine, surmised that the bark contained, besides the latter, some other body of therapeutic activity.

Hesse has now ascertained that quebracho bark indeed contains a second alkaloid *of therapeutical value*, and in larger proportion (0.28%) even than aspidospermine (0.17%). Hesse calls

* *Pharmac. Zeit.*, Sept. 8th, 1880, p. 546.

† Obtained from a white bark of uncertain origin, in 1870. Compare *Pharmacographia* [2], 359.

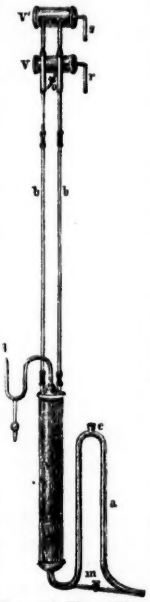
this new alkaloid *quebrachine*. It crystallizes from alcohol in small, white, anhydrous prisms; dissolves easily in hot, sparingly in cold alcohol, and is difficultly soluble in ether. It melts at 214–216° C. (uncorr.) under partial decomposition. Its constitution corresponds to the formula $C_{21}H_{26}N_2O_3$. In pure concentrated sulphuric acid it dissolves with a bluish color, and this tint becomes darker in the course of a few hours. If peroxide of lead is mixed with the acid, the solution rapidly acquires a magnificent blue color. Especially handsome is this reaction, if sulphuric acid containing molybdic acid be used, or if a small crystal of potassium dichromate is added to the solution of the alkaloid in concentrated sulphuric acid. Since quebrachine, when boiled with solution of perchloric acid, yields a yellow solution, the preceding reactions resemble somewhat those of curarine and strychnine. On the other hand, Dr. Penzoldt found that the physiological effect of quebrachine (in the frog) did not agree with that of strychnine, although it had a considerably poisonous effect. According to Penzoldt, 0.04 gm. of the alkaloid speedily produced death in a small rabbit.

Quebrachine is a strong alkaloid, turning red litmus-paper blue in alcoholic solution, and neutralizing strong acids completely. Its neutral sulphate crystallizes in colorless, short, square prisms, which are very easily soluble in alcohol and hot water, and also quite soluble in cold water. If the crystallization is disturbed, it is obtained only as a crystalline powder. In either case its composition is $(C_{21}H_{26}N_2O_3)_2.H_2SO_4.8H_2O$. The neutral hydrochlorate also crystallizes in short, white prisms, which are but very little soluble in cold, but easily in hot water. Its aqueous solution yields a dark-yellow, flocculent precipitate with platinic chloride.

Dr. Hesse states that quebracho bark contains, besides aspidospermine and quebrachine, three other alkaloids, and he promises further details in a subsequent paper.

Bunsen's Water Blowpipe and Aspirator.

One of the most convenient forms of aspirator and blast apparatus is that devised by Prof. Bunsen. It consists of two principal portions: the water-drum *W*, and the water-reservoir *V* above it. The water-drum is a cylinder of copper, or tinned iron, 40 to 60 inches high, and about 8 inches in diameter, with rounded or dome-like ends. From the lower end extends a tube *a*, of about 1½ inch. internal diameter, curved upwards to about two-thirds of the height of the drum, and then again downwards to the level of the lower bend. At the upper curve, a short open tube *c* is inserted. The upper end, or dome of the water-drum *W*, carries three tubes, two of which, *b b*, lead to the reservoir *V*, situated above, while the other is curved in the shape of the letter *S*, and at its lower bend is provided with a short tube, ending in a faucet.



Bunsen's Water Blowpipe and Aspirator.

The tubes *q* and *s* are connected with appropriate stop-cocks, arranged conveniently at the lecture, or laboratory, table, and are used, the former for delivering a blast, and the latter for aspiration, as will be seen below.

The upper reservoir consists of two separate parts, or cylinders: the lower, *V*, receives a supply of water by the tube *r*, while the upper, *V'*, is provided with a lead pipe *s*, which leads to the work-table, and there connects with a stop-cock. The distance of the water-drum *W* and the reservoir *V* should be 16 to 26 feet. If the laboratory or lecture room is not sufficiently high, a portion of the apparatus, or the whole of it, may be placed outside, but should be so situated that the water contained in it cannot readily freeze in winter time. Of course the stop-cock regulating the supply of water to the reservoir *V* must be within reach of the operator, and should be near the other stop-cocks.

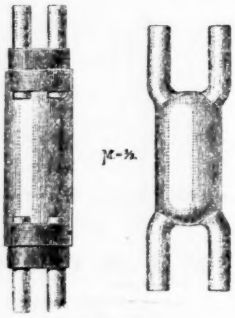
As soon as the water is allowed to rise into the reservoir *V*, it begins to fall through the two long tubes to the drum *W*, but in doing so, it aspirates air through the lead pipes, which it carries along with it, and which accumulates in the upper part of *W*, while the water flows from it through the curved tube *a*. The air, which is constantly increased in quantity by the access of a fresh supply from above, becomes compressed, and, if the stop-cock communicating with *q* is opened, escapes as a continuous stream or blast. If this stop-cock is kept closed, the accumulating air gradually forces the water out of the drum *W*, until finally water and air escape together. To prevent the tube *a* from acting as a siphon, and emptying the drum *W* as soon as the water has reached the upper bend, the short open piece *c* is attached to the latter. The stop-cock delivering the blast may, therefore, be closed at any time, without interfering with the working of the apparatus, and the supply of air may be controlled by the stop-cock connecting with *s*. To guard against the possibility of freezing in winter time, it is advisable to connect the lower bend of the tube *a* with a straight tube provided with a stop-cock, and likewise the bottom of the reservoir *V* with one of the tubes *b* by a similar pipe and stock-cock. During cold weather, both stop-cocks are only closed while the apparatus is in use, but are immediately afterwards again opened to prevent any accumulation of water in the tubes.

The apparatus may be used, not only for the

production of a blast (for glass-blowing, etc.), but also for aspiration (rapid filtration, etc.), and is fully equal to Bunsen's filter-pump.

A Simple Aspirator.

ONE of the most simple forms of aspirators, for facilitating rapid filtration, or in general, for the production of a rarefied space, is the contrivance illustrated in the accompanying cut (and also in our preceding number, page 73), devised by Friedrich Lux. It may either be constructed from a piece of wide glass tubing, by means of two corks and four smaller glass tubes, or it may be entirely constructed of glass. One of the tubes introduces water; another, to which a rubber tube is attached, carries it off; the third tube is connected with the vessel from which air is to be aspirated, and the fourth tube may either be used for the same purpose, or it

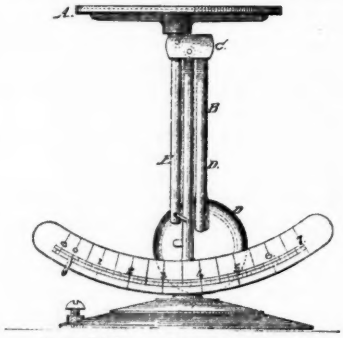


Lux's Aspirator.

may be connected with a manometer, or it may be closed with a stopper. It makes no difference which tube is selected for introducing the water; but if the air is to be aspirated by one of the lower tubes, the vessel to be exhausted must stand at a higher level than the aspirator itself. In all cases the escaping water carries with it a copious volume of air, and produces a more or less rarefied space, depending on the length of the exit tube. The latter should have a bore of 5 *mm.* ($\frac{1}{5}$ inch) and a length of at least 1 meter (39 inches), and should be provided, near its attachment to the apparatus, with a screw pinch-cock, the proper regulation of which essentially facilitates the use of the aspirator.—From *Zeitsch. d. Anal. Chem.*, 1880, 455.

Pendulum Scale.

THIS form of scale appears just now to be receiving the attention of inventors. The one here described is the latest addition to the list and consists of a platform *A*, on which the article to be weighed is placed. *B* is a standard supporting the working parts and having a base resting on three points, one of which is adjustable. This standard has on its upper end a cross-head which sustains a yoke, *C*, made of two end-pieces and a connecting cross-bar. To this cross-bar is attached the pendulum rod *D*, the lower end of which is weighted. Steel pivots sustain the yoke *C*. *E* is a movable post upon which rests the platform *A*. A little way below the upper end of this is a cross-bar loosely secured between the ends of the yoke by steel pivots passing through the end pieces of the yoke into the ends of the cross-bar. The post *E* extends down parallel with and nearly the length of the standard *B* to which it is secured at the bottom by a link which allows vertical motion. A segment of a circle is attached to the standard and is graduated to register the division of weights. At the lower end of the pendulum is attached a wire as long as half of the graduated segment. This is bent so as to furnish a point traversing the front of the segment. A weight placed on the platform bears upon



G. F. Richardson's Pendulum Scale.*

the cross-bar of the movable post *E*, and, acting as a lever with the pins in the cross-bar of the standard *B* as a fulcrum, raises the opposite side of the yoke to which is attached the pendulum *D*. The pendulum, as it rises, causes the pointer to traverse the face of the graduated segment until the equilibrium between the object being weighed and the pendulum causes it to rest stationary.

Coating for Pills.

THE following two methods have lately been described for coating pills:

1. Dissolve 1 drachm of isinglass in 1½ fl. oz. of simple syrup, pour a small quantity of the warm solution upon the pills, which must be thoroughly dried and hard, and sprinkle powdered talc over them under constant rotation, and under the application of a gentle heat. This is best done upon a shallow round tin-box, and the process succeeds even in the hands of a novice, provided the powdered talc is used in sufficient quantity and the pills are rolled until completely dry. This coating has a fine white appearance, is glossy, very smooth, and does not peel off.

* Pat. No. 236,261, January 4th, 1881.

2. Make a saturated solution of balsam of tolu in ether, place the pills in a jar, moisten them thoroughly with the solution, and then throw them in the coating tray, namely, the round tin box (lid of a tin box, etc.) above mentioned, which is nearly half filled with powdered talc. They are rapidly rolled about in this for a short time and then allowed to dry. Afterwards they are coated once or twice more as follows: Drop upon them a solution of equal parts of fresh mucilage and water, 2 drops for every dozen pills, again throw them in powdered talc and dry again. Finally, polish them by rolling in the empty coating-tray until they acquire a gloss.

The second method is preferable when it is desired to completely mask the color of the mass and obtain perfectly white pills.

In England it is customary to improve the appearance of these pills by the addition to the talc of a little carmine, just enough to impart either a rose-red or yellowish tint.—*Chem. and Drugg.* and *Pharm. Centralh.*, 1880, 428.

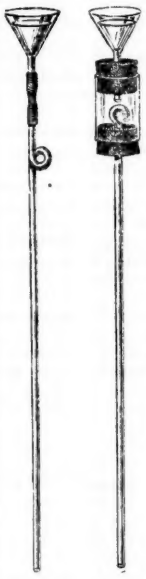
Detection of Fuchsine in Wine and other Liquids.

MR. F. KOEING describes the following method of testing for fuchsine in wine and other liquids, which is capable of detecting traces that could not be recognized by any process heretofore proposed. It is based upon the fixation of the coloring matter upon wool-fibre, the destruction of the latter with solution of potassa, and the separation of rosaniline from the alkaline liquid by ether.

About 50 cc. of wine are mixed with ammonia in slight excess, until the red color has changed to a dirty green. About 0.5 gm. of pure white wool-fibres are now placed into the mixture, and the whole boiled in a flask until all the alcohol and the excess of ammonia are driven off. During this operation the green color gradually passes into brown-red, most of the true coloring matter of wine is destroyed, and fuchsine or other aniline colors are fixed upon the fibre. The latter is then removed from the liquid, washed with water and pressed. If the quantity of fuchsine in the wine was at all considerable, the fibres will be found to be considerably tinted; but even if the wine was pure, the fibre will have a faintly reddish color. The fibre is now placed in a test-tube and moistened with pure solution of potassa containing about $\frac{1}{8}$ to $\frac{1}{10}$ of solid caustic potassa.

The fibre should only be moistened and not swim in the liquid. It is now carefully heated under constant turning and agitation, until the fibre has been completely reduced to a more or less brown-colored liquid. After cooling, this is mixed with about one-half its volume of pure alcohol and afterwards with an equal amount of ether, upon which it is agitated first gently, and afterwards more energetically. This process avoids the annoying formation of an emulsion which usually takes place when wine made alkaline with ammonia is directly shaken with ether. After a few seconds, the ether separates with a portion of the alcohol and the whole of the rosaniline, as a clear colorless layer upon the brown liquid. It is poured off or otherwise separated, and mixed in a test-tube with acetic acid, which causes, in presence of the least quantity of rosaniline (corresponding to its hydrochlorate, that is, fuchsine, in the wine) a red color. The delicacy of the reaction depends chiefly on the fact that nearly the total coloring matter of the 50 cc. of wine is concentrated in the small amount of alkaline solution. During this process, the natural coloring matter of the wine is destroyed.

If wine only contains 1 milligram of fuchsine per liter, the ether will have a strong red tint; with 0.1 mg. it is still rose-red, and even with 0.04 mg. the tint may be recognized. The violet or blue aniline colors may likewise be detected by this method. The quantity of fuchsine present may be approximately estimated by operating with constant volumes and comparing the tints with solutions of known strength.—*Ber. d. Deutsch. Chem. Ges.*, 1880, 2,263.



Funnels for Rapid Filtration.

BESIDES the appliances we have on many previous occasions described, for rapid filtration, there are some very simple ones, which often lead to the same results. One of these is the use of funnels, such as have for some time been in the market, the neck of which contains a slight bulbous expansion, and ends in a comparatively long tube, of narrow diameter, but narrowest in about its middle, while it becomes a trifle wider towards the end. The stem of these funnels is about twice as long as the funnel part itself. Those which we have seen so far, and used, were of German make, but they could just as well be made here.

Another method is to prolong the stem of a funnel, in the manner shown in the figure. The object is to gradually hasten the fall of water, within the tube, to such an extent that the column will draw after it the liquid in the funnel at a much greater speed than would otherwise be the case. But, in order to succeed in this, the water must be made to run down on the whole of inner sides of the tube, not merely along one side of it. For this purpose, the end of the funnel is either connected with a glass tube into which a bend has been blown, or it is connected with a glass tube of the shape and in the manner shown in the other figure.

CORRESPONDENCE.

THE APPROXIMATE EQUALIZATION OF MEDICINAL POTENCY IN DRUGS AND CHEMICALS.

BY OSCAR OLDBERG, PHAR.D.,

Medical Purveyor, U. S. Marine Hospital Service.

DR. ALBERT MERRELL, of St. Louis, in his paper in the January number of NEW REMEDIES, makes certain suggestions concerning the system proposed by the present writer (see the August, 1880, number of NEW REMEDIES) to overcome as far as practicable the great inconvenience arising from the enormous differences in potency obtaining among the numerous remedies now in use. The suggestions of Dr. Merrell are these: First, to confine the class of preparations recommended to only two groups, one to consist of powders, the potency of which shall be represented by one gram, and the other to consist of liquids, the potency of which shall be represented by four cubic centimeters (or four fluigrams); second, to adjust the dilution with reference to the *maximum* instead of the *average* dose; third, to adopt a system of expressing the relation of the strength of the preparation to that of the drug, the latter to be designated by the word "normal;" and fourth, to give to this class of preparations the general title "attenuations."

In my paper it was suggested that "most drugs and preparations can be diluted, or concentrated, or prepared in such manner that the dose of the product shall be one of the following enumerated quantities, viz.: 0.1, 0.5, 1, 2, 5, or 10 grams, or the same fractions or multiples of the cubic centimeter."

Of course only *one* of these groups may be attempted for a beginning, and it may as well be one of which the average adult dose shall be approximately represented by one gram, as any other. The writer's object is to reduce the whole range of materia medica to as small a number of dose-groups as possible, without making the preparations so weak as to render their respective doses inconveniently large. One gram of powder is to most persons a very large dose to take. The smaller the dose the better. If the physician wishes to further dilute the preparation he will do so. Moreover, if he wishes to combine two or three preparations the dose of each of which is one gram, he will find the dose of the combination practically forbidding.

To adjust the dilution with reference to the *maximum dose* seems more uncertain and dangerous, as well as inconvenient, than to adjust it with regard to the *average dose*. It is to be distinctly understood that the writer has never entertained the idea that a rigidly fixed quantity could or should be declared to be *the* dose of any remedy, nor that any restriction in the least degree might be permitted in the absolute freedom with which the proper dose may be regulated. To deny, however, that there *is* such a thing as an approximately or roughly correct ordinary average adult dose is practically to admit that the experience of the past with reference to posology is worthless, and that the practice of medicine, so far as relates to prescribing the quantities of drugs or preparations to be taken by the patient, is mere guess-work. Taking for granted that the physician has made a correct diagnosis and selected the proper remedy, it is surely safe to say that the proper adult dose to be administered lies within comparatively narrow limits. There are many conditions that affect the action of a drug. Among those well recognized are the conditions pertaining to the drug itself, to the character of the preparation made from it, to the age, sex, etc., of the patient, to the character of the disease, etc., besides which the individual notions of prescribers differ. And yet, with all these influences taken into consideration, there is still an average adult dose to which the physician may safely and advantageously refer, mentally or otherwise, before he prescribes the remedy he has selected, especially in cases where that remedy is one which he is not in the habit of using frequently. If this proposition be not true, then posology is not only useless but a positive evil, and each physician, young or experienced, must learn doses exclusively by "experimental research"—a doctrine which will hardly be seriously entertained.

If posological tables are safe to follow or quote, the common minimum adult dose is to the maximum dose as 1 to 2 in most cases, 1 to 3 in a great number, 1 to 4 in some, 1 to 5 in a few, 1 to 6 in comparatively rare instances, etc. Practically the extreme variation may usually be safely put at from 1 to 3, *i. e.*, if the average dose be 2 cents. (centigrams) the minimum will usually be about 1 cent., and the maximum not more than 3 cents. But the respective doses of two different drugs may vary from 1 to 500,000, and not uncommonly from 1 to 1,000. It is to level somewhat these great differences in potency existing between different remedies that it is proposed to fix the strength of preparations in such manner that the proportion of the active constituent to the diluent shall be in inverse ratio to the posological potency of that active constituent.

Again, the value of fixing in the memory the dose of the *crude drug* itself, instead of the dose of its preparation, is small indeed if that crude drug has no fixed dose which can be safely referred to as a check. There are very few drugs which are used in medicine in the crude state in our day, and no physician who does not himself prescribe the crude drug can learn its dose except by memorizing or referring to arbitrarily adopted standards laid down in books. The truth is probably that it is safest and best for each physician to learn the dose of each and every *preparation* he is habitually using without reference to the crude drug or active constituent it represents or contains. How many physicians can tell the dose of the chloride of iron of the pharmacopœia? It is probable that very few could answer except by *estimating* that dose from the dose of its solution, the tincture of iron. The doses, respectively, of extract of nux vomica, tincture of aconite root, syrup of squill, etc., are well known by physicians, who do not know or care to know the doses of nux vomica, aconite root, squill, etc., and the number of similar cases may be extended to perhaps three-fourths of the organic materia medica list. I fancy that the value of simple and uniform proportions between drug and menstruum in tinctures, etc., *for the purpose of simplifying posology*, is altogether chimerical. It is at least probable that there are many preparations, the doses of which do not bear that relation to the respective drugs from which they are made, which we would naturally arrive at when reasoning from their known proportional strength. The most convenient and safe plan, and no doubt the actual practice, is to look upon each preparation as being posologically distinct from any other remedy, whether simple or prepared, and to ascertain the dose of it and prescribe it, without reference to the substance or substances from which it is made, or its strength as compared with the crude drug or active constituent. If I am wrong in this conclusion I should be very glad to be corrected. Being a pharmacist, and not a physician, I do not base the proposition upon data from my own experience, but from the experience of physicians, as stated in books or otherwise, and largely from the dose-tables I have seen. The question is an important one, and I should be very thankful for a refutation of any error I may have fallen into.

It is not invariably true—perhaps not even generally true—that a fluidrachm of a well-made fluid extract and a drachm of the powdered drug produce the same effects, and in equal degrees, respectively. But, be that as it may, it is the fluid extract, or the extract, or the tincture, or the syrup that is used, and not the crude drug, and is it not a waste of time to think of *a* in prescribing *b*?

When a new preparation, or a preparation of a new drug, is introduced, the physician will doubtless inform himself of the strength of it, and of the dose of both the drug itself and its preparation (*i. e.*, if there is such a thing

as an approximate standard dose), but after he has been using the preparation for some time, he may have forgotten its proportional strength, and the dose of its principal constituent, or of the crude drug from which it is prepared, while he still knows all about the dose of the preparation itself. And this is, in the writer's view of it, very natural, as well as based on common sense. The physician may vary the dose from 1 to 20, or to even greater extremes, and yet he will generally have in mind a certain fixed quantity which to him represents the ordinary average dose of an adult.

Why do college professors examine candidates for graduation as to the usual doses of certain drugs and preparations, if doses as learned from the text-books are not good guides?

The *maximum* dose is too uncertain a quantity to refer to, because authorities that agree as to the range of the ordinary doses, may vary exceedingly as to the maximum dose. Besides, the serious mistake may be made of prescribing the maximum dose as *the* dose, overlooking the word *maximum* or its full meaning.

To introduce *symbols*, such as suggested by Dr. Merrell, would, in the writer's opinion, mystify the otherwise plain system, and lead to mistakes. Their use is safe enough in the hands of Dr. Merrell and other painstaking men, but it is too troublesome to be safe in the hands of many. It would be better to print on the label a statement in plain English, spelling out every word in full, or to use a nomenclature, such as suggested by the writer in the paper already referred to, or both. If the prefixes recommended by me are deemed too difficult to learn, which seems hardly probable, then let us say "five-grain lactose," "half-gram percolate," etc., as the case may be, to indicate that the average dose is five grains, one-half fluigram, etc. In any event, as suggested in my former paper, it would be useful to state on each label "the percentage strength of each preparation, together with the exact quantity of active constituent represented by the average dose of the preparation," because, until prescribers become familiar with these preparations themselves, they will require such information for purposes of comparison.

New names are desirable to distinguish absolutely between these preparations and such as are now in use, in order to render mistakes impossible. "Attenuations" is, however, not a good name, partly because it does not indicate the character of the preparation (*i. e.*, whether it is a solid or a liquid, the kind of menstruum, or the mode of preparation), and because not one-half of the preparations made on this plan would be "attenuations," properly speaking, unless the class is limited to the most powerful remedies.

WASHINGTON, D. C.

AN EXPERIMENT IN THE DIFFUSION OF FLUIDS.

TO THE EDITOR NEW REMEDIES.

DEAR SIR:—Will you explain, through the columns of your journal, the change which takes place in the following mixture: In September last, I put in a flat oil show bottle 8 ounces water, 8 ounces turpentine, and 8 ounces alcohol. Water colored red, turpentine white, and alcohol blue, making 3 colors in 1 bottle. Now this is the strange part to me—the alcohol has disappeared one-half, and the water at the bottom has increased one-half, while the turpentine has not changed, but has moved up to allow for the alcohol to unite with the water; also, the red water at the bottom has not changed by the blue alcohol going down. The alcohol was pure 98. Now why should this fall, having a specific gravity lighter than either the oil or water? By explaining this change, you will oblige. I am, respectfully yours, S.

[The solution of this apparent puzzle is not at all difficult. Liquids, as well as gases, have the property of diffusing themselves, both of them inversely as their density, and the former, besides, in a direct proportion to their mutual solubility. Now, oil of turpentine, which occupies the centre layer, has the power of dissolving small quantities of alcohol, and also traces of water. Any molecule of alcohol dissolved by the turpentine eventually comes in contact with the watery layer, and is withdrawn and dissolved by the latter. An upward diffusion of the water through the turpentine probably takes place also, but only in minute proportions. Now, as the rate at which the alcohol diffuses into the oil of turpentine and water is more rapid than the diffusion of the oil of turpentine into the alcohol, it follows that the alcoholic layer will diminish much more rapidly, and, of course, the watery layer will take up this alcohol. In a case like the present, the diffusion may be considered as an osmosis, the oil of turpentine forming the dialyzing membrane. Why the red water was not altered by the blue alcohol could be explained in several ways: either there was a great deal more red in proportion, and the blue is obliterated, or possibly the water was acid. Without knowing the kind and quantity of coloring matter, and the reaction of the liquids, we cannot give a reliable explanation.—ED. N. R.]

AN ANSWER TO "W. H. N." IN REFERENCE TO THE PROPOSED LEGISLATION TO PREVENT THE ADULTERATION OF FOOD AND DRUGS.

BY O. O.

"W. H. N.," judging by the tone of his answer (?) to my criticism of the proposed bill to prevent the adulteration of food and drugs, is unduly disturbed about it. It is difficult to understand how any one perusing said criticism (Feb. number of NEW REMEDIES) can come to a conclusion so totally erroneous as that I am antagonizing the bill. On the contrary, the very first lines of my communication ought to convince "W. H. N." that I earnestly desire the enactment of such a law.

Believing with "W. H. N." that, "no matter how perfect any proposed bill may seem at the first glance, there may yet be room for improvement," and being heartily interested in the question, I ventured to offer certain suggestions for what they were worth.

The National Board of Health, as stated in my review of the bill, is not likely to have at any time among its membership any person possessing ample practical knowledge and experience in pharmacognosy, the probable impurities, defects, substitutions, and adulterations in food and medicines, and how these may be detected, and hence it is not unwarrantable to propose that such precautions shall be prescribed in the bill "to insure the appointment of properly qualified examiners," as "W. H. N." says, he has been assured that the present National Board of Health will probably adopt whether the law requires it or not.

I agree with "W. H. N." that there is no difference between what the examiners or analysts *should be*, and what I believe they will be, if the present National Board of Health pursues the plan proposed in the substitute offered for the bill under discussion.

While being "unprejudiced," I still believe that to leave the selection of a public analyst to a Collector of Customs will impair the efficiency of the law, and cling to the notion that the National Board of Health will be better able in all cases to select a properly qualified chemist to decide questions of doubt than the Collector of Customs. A referee of that character would naturally be a prominent chemist, concerning whose capacity there is no doubt, and who would be willing to decide these questions for a proper and sufficient fee, while he would be quite unwilling to serve as a regular employee of the government for what he would deem an entirely inadequate annual compensation. As to the regular "special examiners," or "public analysts," their entire time should be devoted to their duties, and the law should, in my humble opinion, require that none of them should be appointed without having previously passed a suitable examination before a board

qualified to conduct such an examination as in this case would be proper.

As to my criticisms of Sec. 8 of the bill of the National Board of Trade, it is deemed a sufficient reply to "W. H. N." to state that he does not answer them, and that the substitute offered differs *essentially* from the original. The objections to Sec. 8 of the original bill, so far as it refers to medicines, are serious enough, when it makes it a criminal offence to import commercial drugs and chemicals for manufacturing purposes under their customary trade names.

It does not seem to have occurred to "W. H. N." that par. 6 of Sec. 8 of the original bill is so worded that an altogether innocent coloring, or powdering, or coating, or polishing may conceal damage, and may make the article appear better than it is, or of greater value, and that it would be manifestly wrong to make it a criminal offence to sell cooking butter which may have been colored so as to look "better than it really is," when it is sold at the price usually charged for cooking butter and with no intent to deceive the purchaser.

It is not improbable that the proposed substitute is unnecessarily verbose, but then it is just what it purports to be—an improvement upon the original, in that it does not contain the objectionable features referred to.

When "W. H. N." objects to the requirement that the National Board of Health shall consult experts, and the failure to require that they shall be governed by the advice of these experts, he only argues against committing this matter to that Board at all. Sec. 7 of the substitute is based on the supposition that the Board *will* be governed by the advice of the experts, and if it is at all probable that they will not be so governed, then the National Board of Health would not be the proper body to enforce this law. It is my firm belief that they would.

The force of the observation made by "W. H. N.," relative to Sec. 14 of the substitute, is not appreciable.

Any real friend of the proposed legislation might well, it is thought, compare the two bills side by side without being tempted to find fault because no difficulty is found in framing a law "when others have with care selected the material necessary."

VASELINE AS A BASIS FOR UNG. HYDRARGYRI.

EDITOR NEW REMEDIES:

SIR:—The preparation of *Unguentum Hydrargyri* with as little labor as possible has been and is still a question perplexing the pharmacist.

On the 14th of February, 1877, I had occasion to make up a large quantity of ointment, and not relishing the idea of so much grinding, made a number of experiments, hoping to discover something that would facilitate the reduction of the mercury without materially injuring the ointment, and which would be an improvement to the old formulæ, all of which I had used with but poor success. I was about giving up, when it occurred to me to try vaseline, which was then a comparatively new thing. It acted like magic, the mercury disappearing in about ten minutes, making a beautiful ointment, slightly lighter in color than usual. But the color deepened in a short time to its usual tint. The following formula is the result of my experiment:

Mercury and lard, each.....	1 lb.
Vaseline.....	2 oz.

I called the attention of several pharmacists to the formula, none of whom had ever tried vaseline. They at once fell in with the idea, and are now using the above formula.

ALEX. MCKAY.

DORCHESTER, N. B.

NATIVE PYRETHRUM.

EDITOR NEW REMEDIES:

In the January Number of NEW REMEDIES, in the article on "Insecticidal Plants and their Cultivation," you state that it does not seem to be a difficult matter to attempt the cultivation of certain species of *Pyrethrum* in this country. As you do not seem to be aware of the fact that *P. cinerariæfolium* has been successfully cultivated in this country, I send you the following extracts from "Bulletin No. 3" of the U. S. Entomological Commission, issued Jan. 28th, 1880, p. 63, *et seq.*

"Mr. Milco, a native of Dalmatia, has been cultivating the *P. cinerariæfolium* in California in constantly increasing area for the past three years, and deserves great credit for his efforts in introducing it. The Californian product is put upon the market in neat bottles and packages under the name of 'Buhach,' etc."

P. 65.—"The powder is now selling in California at wholesale, at $1.25 per lb.; but from facts kindly communicated by Mr. Milco, it appears that he has raised as much as 647 lbs. to the acre, and that the cost of production, milling, etc., on a large scale, need not exceed 6 to 7 cents per lb., because in the experiments attending the introduction of the plant many obstacles and expenses incident to new enterprises have had to be met. The plant is wonderfully free from insect enemies and blooms all through the summer, and there seems no good reason why it should not grow in most of the Southern States."

JOSEPH FEIL.

CLEVELAND, O., 800 Woodland Ave.

Logwood Ink—Correction.—MR. TURNER BUSHWELL, of Solon, Me., writes that the first formula for "Logwood Ink" on p. 92 of our last issue is wrong, and that the second formula is Runge's, published many years ago, and "first of the kind, excepting Runge's, was 1¼ ozs. of chromate (instead of 1½ oz.). Brande says 20 lbs. of extract are obtained from 100 lbs. of wood. Upon this basis the first formula becomes—Dissolve 1 lb. extract of logwood in 40 lbs. of water, and add, one after the other, stirring well, 1 oz. of alum dissolved in 1 lb. of water, and ½ oz. of yellow chromate of potassium, dissolved in 2 oz. of water. Compare these with fourth and fifth formulas, which are 1 oz. in 50 ozs. I know by experience that 1 to 15 is too much."

Treatment of Whooping-Cough in Gas-Works.—According to the *Lancet*, a series of recommendations on the treatment of whooping-cough in gas-works has been made to the French *Académie de Médecine*. Some time ago, a committee of three was appointed to investigate the subject, and of these M. Roger, the President of the Académie, is the sole survivor. He has lately presented a report which is of considerable interest. Before considering the communication, he described the arrangement of the chambers for purifying the gas, and the chemical products which patients would breathe therein. The purifying chamber is a large room with doors and windows freely open, Each contains twenty-four vessels, holding five cubic meters of depurating substance—lime and sulphate of iron mixed with sawdust—through which the gas has to pass. When the workmen are emptying and refilling these vessels the children with whooping-cough are placed around it, and inhale the vapors which escape. They are in an atmosphere containing ammonium sulphide, carbolic acid, and tarry products. As to the efficacy of the treatment, M. Commenge records 120 cases in which the treatment was persevered with. In 20 the treatment failed completely, in 48 improvement followed, and 101 were cured. M. Bertholle merely states that of 341 cases 122 were improved and 219 were cured. Failures or deaths are not mentioned. Besides the 490 cases improved, there were, it appears, 671 cases not included, because the treatment was not persevered in, and these perhaps include a large number of failures. The remote situations of most gas-works, and the exposure involved in the treatment in winter, must necessarily limit the application of the method. M. Roger thinks that it acts only upon one element of whooping-cough—the catarrh—and that it is contra-indicated in febrile attacks of the disease, and would be dangerous in complicated cases. The method, however, is easy of use in summer, and seems worthy of further trial in suitable cases.

RECENT PAPERS.

Condensed Milk.—(E. WIEN.) Experiments have shown the author that the fat in condensed milk cannot be estimated in the usual manner by evaporation with sand and treatment in an ether apparatus, as the large quantity of sugar present causes the formation of hard lumps, which the ether cannot penetrate.

The method he pursues is to place 5 grams of the milk in a dish, and treat it with continually renewed quantities of ether until it is all washed through a filter into a flask; sea-sand is added, and the lumps which form constantly broken up, and the operation repeated until all the fat is completely exhausted; the ether evaporated, the fat redissolved, the ether again evaporated; and the fat weighed. For the nitrogen determination, the author adds gypsum, dries on the water-bath, and proceeds according to the soda-lime process. If the milk be dried in Hoffmeister's dishes, care must be taken not to employ too great heat, as a small loss of nitrogen occurs: 0.2 per cent. Some samples of condensed milk, made in a certain factory, examined according to this method, gave results very close to those obtained by normal milk.—*Biederm. Centr.* and *J. Chem. Soc.*

Adulterated Asafœtida.—At the last July meeting of the Society of Public Analysts, Dr. J. Muter exhibited and made some short remarks upon a specimen of adulterated asafœtida, which had been forwarded to him by a member of the Pharmaceutical Society, as having been sold to the firm with which he is connected. The article, outwardly, possessed a very excellent resemblance to the drug as met with in tears, having the usual odor and other physical properties, except that the tears were, perhaps, rather too perfectly rounded. When each tear was opened, there was to be seen a piece of stone snugly ensconced in the centre of it. Taking the average of three tears, I found by weight:

Asafœtida	21.23
Stone	78.77
	100.00

The stone employed was a species of magnesian limestone, as shown by the following analysis of it made by one of Dr. Muter's students, Mr. Orestes Pisani, M.P.S., after igniting off the asafœtida:

Calcium carbonate	51.50
Magnesium carbonate	39.90
Siliceous matter	7.00
Iron and alumina	1.60
	100.00

There appears to be very little doubt but that the fabrication of the article has been most deliberately carried out, as the stones were all of nearly the same size, and carefully chipped to a suitable shape for resembling tears, after receiving a coating of the gum resin. That the stones had been covered by melting the asafœtida, and then dropping them into the liquid until they had taken up a sufficient coating, was rendered probable by the fact that, although the coating smelled fairly, it yet contained far too little of the volatile oil of the drug. In conclusion, it would seem advisable that pharmacists, having tear asafœtida in stock, should examine the same by cutting open a few of the more rounded fragments, as I have heard of the discovery of this adulterated article from more than one source lately, and any one innocently selling it might be placed in an awkward position.—*The Analyst.*

Quantity of Nitrite of Ethyl in Spiritus Ætheris Nitrosi.—(E. KELLSTRÖM.) The great variability of the amount of nitrite of ethyl in the commercial spirit of nitrous ether, even under close observance of the usual officinal process, may be judged from the following experiment: A certain quantity of each sample was weighed in a flask and digested in the water-bath with alcoholic solution of soda, until the nitrite of ethyl was completely decomposed. The liquid, which now contained nitrite of potassium, was evaporated on the water-bath, the residue redissolved in water, and, after filtration, dilution, and acidulation with sulphuric acid, titrated with permanganate of potassium. The various samples (obtained from drug stores in Stockholm) yielded 0.2, 0.3, and 2.5%, while another prepared in the Pharmaceutical Institute contained 3%. An attempt to obtain a product of higher percentage by cooling the receiver with ice was not successful; the resulting product only contained 3.2%.—*Farmac. Tijdschrift*, and *Pharm. Zeitung.*

On the Variation of the Quantity of Ash in Different Parts of Plants.—AUG. VOGEL reminds investigators that in the assay and analysis of the ash of different parts of a tree or plant, it should be borne in mind that the composition of the ash differs considerably according to the season, and also according to the part of the plant from which it is derived. The author has derived, from a series of analyses, the general law that the quantity of water-soluble constituents of the ash is greatest in the last period of vegetation in all fleshy and succulent fruits, compared with the other constituents. The smallest amount is found in the wood, somewhat more in the leaves. The phosphates are variable, quantitatively, in stem and leaves, but the difference is immaterial. A very remarkable exception, however, is elder-wood, in which the phosphoric acid amounts to 42% of the ash, while in that of the leaves it amounts to 16.2%.—*Chem. Zeit.*, fr. *Sitzungsb. Akad. Münch.*

Products of the Distillation of Petroleum Gas-Tar.—(W. RUDNEW.) In many parts of Russia, the low price of petroleum, and the comparative scarcity of coal (owing to the mines not being sufficiently worked), make the manufacture of gas from petroleum more profitable than from coal. In this process, a quantity of tar is obtained, which has only lately been subjected to examination, and in which A. Letny (1878) has found aromatic hydrocarbons.

Upon the Provincial Industrial Exposition at Kasan in 1880, the gas works of this city exhibited, for the first time, the products of the distillation of this tar. These are as follows:

1. *Benzol.* Colorless liquid of 0.875 spec. gr. at 19° C., representing almost pure benzol. On cooling below 0°, it congeals to a crystalline mass; begins to boil at 80° C., most of it passing over between 81° and 83° C.

2. *Benzin.* Colorless liquid of 0.870 spec. gr. at 19.5° C. Begins to boil at 80° C.; 64 6 per cent pass over between 80° and 108° C., and 26.9 per cent between 100° and 120° C. It is chiefly a mixture of benzol and toluol.

3. *Naphthalin.* The gas tar is distilled in a large iron boiler heated by a direct fire. At first, light oils and water pass over; afterwards, naphthalin. (The light oils are once more rectified, treated with concentrated sulphuric acid and caustic lime, and finally washed with water. When thus purified, the oils are subjected to fractional distillation.) After the naphthalin has been distilled off, it is purified by sublimation.

It is a remarkable fact that petroleum gas tar contains scarcely any phenols. On treating the tar with caustic soda, decomposing the filtered alkaline solution with hydrochloric acid and adding bromine water, only traces of phenol are observed.—*Dingler's Polyt. Journ.*, 239, 72.

Trichlorphenol.—(Compare March number, p. 92.) According to V. Dianin, a mixture of phenol with chloride of lime—which develops trichlorphenol, besides dichlor- and monochlor-phenol—is possessed of greater healing power and antiseptic effect than pure phenol or carbolic acid. According to C. O. Cech, the same mixture may be prepared by passing chlorine into carbolic acid.

It has, however, been ascertained that these chlorine substitution products of phenol have such a penetrating and persistent odor that the latter will adhere to clothing, etc., for weeks. For this reason, their use as remedies does not appear to deserve recommendation.—*Chem. Centralbl.* and *Dingler's Pol. Jour.*

Peanuts and Peanut-Oil in the United States.—The peanut (*Arachis hypogæa* L.), sometimes called pindar or ground-nut, is a native of Africa. It was first grown in this country in North and South Carolina and exported to France. Afterward, and until the last twenty years, it was imported into this country for the manufacture of oil. Of late years the importation has fallen very low, owing to the increase of cultivation keeping pace with the demand. It is still used for the manufacture of oil, and largely used in adulterating chocolate, but the great demand is for edible purposes. The crop shows a great increase since ten years.

The States of Virginia, Tennessee, and North Carolina grow five-sixths of the crop, but it is cultivated to a small extent for home use in all the Southern States. In 1875, the total crop was 785,000 bushels, being 115,000 more than the year previous; in 1878, the crop was ,390,000 bushels, of which Virginia raised 875,000, Tennessee 425,000, and North Carolina 90,000 bushels.

In 1879, there was a large increase in the area planted, and estimated at 12 per cent for the whole country. The yield also was greater, thus making a crop, according to commercial estimates, of 1,725,000 bushels. The weight per bushel varies in different localities, and is from 22 to 28 pounds per bushel The value is about $1.15 per bushel, thus making a value of $1,983,750 for the crop of 1879.—*Rep. of Commiss. of Agricult.* f. 1879.

Instantaneous Silvering Mixture.—To coat copper or brass objects with silver, without difficulty or loss of time, the following process is given in the *Gewerb.-Bl. f. Ost- u. Westpreussen*, 1880, 110:

Mix 3 parts of chloride of silver with 20 parts of powdered cream of tartar and 15 parts of powdered common salt. Moisten a suitable quantity of the mixture with water, and rub it with a piece of blotting paper upon the metallic object, which must be thoroughly clean. The latter is afterwards rubbed with a piece of cotton upon which precipitated chalk is dusted, then washed with water, and polished with a dry cloth.

To Coat Articles with Lead.—PROFESSOR EMERSON REYNOLDS thus describes one of the best methods of applying his new process of *galenizing*, or covering with lead various substances: Take 16 grams of solid sodic hydrate (NaOH), or an equivalent of other suitable hydrate, dissolve it in 175 liters of water, add to the liquid 17 grams of lead nitrate ($Pb2NO_3$), or an equivalent of other lead salt, with 250 cubic centimeters of water, and raise the temperature of the mixture to 90° C. If sufficient lead salt has been added the liquid will remain somewhat turbid after heating, and must then be rapidly strained or filtered through asbestos, glass wool, or other suitable material into a convenient vessel. The filtered liquid is then well mixed with 100 cubic centimeters of hot water, containing, in solution, 4 grams of sulpho-urea or thio-carbamide. If the temperature of the mixture be maintained at about 70° C., a deposition of galena in the form of a fine adherent film or layer quickly takes place on any object immersed in or covered with the liquid, provided the object be in a perfectly clean condition, and suitable for the purpose. When the operation is properly conducted, a layer of galena is obtained, which is so strongly adherent that it can be easily polished by means of the usual leather polisher. It is not necessary to deposit the galena from hot liquids, but the deposition is more rapid than from cold solutions.

The most convenient solution for deposition on brass is thus prepared: Take a quantity of soda lye, containing 1½ ounces of real soda (NaOH), dissolve in this, with the aid of heat, 3 ounces of tartrate of lead, and just before diluting the solution to one gallon of cold water, add 5 drachms of sulpho-urea, previously dissolved in a small quantity of hot water. The articles are to be immediately immersed in this bath, and the temperature raised to boiling. When the desired tint is obtained the articles are to be removed, washed, and polished. The above solution can be used for glass or porcelain, hot or cold, if the proportion of alkali be reduced one-third or thereabouts.

Composition of Several Proprietary Remedies.—The following are taken from the *Chemist and Druggist:*

Radway's Ready Relief, "a universal cure for all diseases, giving instantaneous relief."—150 grains of a reddish, bright, ethereal fluid, containing, per cent, camphor, 2; capsicin, 035 (corresponding to 14.8 dried capsicum); fatty acid, 1.489; potassium, 2.076; sodium, 231; spirit of ether (s. g., .857), 12; spirit of wine (s. g., .950), 40; water, 43.969.—DR. PECKOLDT.

Morrison's Powders; or, Lemonade Powders, "for the radical purification of the blood, recommended as assisting the action of the pills."—50 grams of white sugar, 30 grams of cream of tartar, 7.5 grams of cinnamon, 4 grams of ginger.—BUCHNER.

Dr. Radway's Regulating Pills, or Perfect Purgative Pills (for 32 different diseases). They are of different sizes and shapes, coated with sugar and gum arabic, each box containing 30. Gamboge, .5 gram; aloes, 2 grams; jalap, 1 grm.; excipient, 6 gram.—HAGER.

Dr. Radway's Renovating Resolvent, a somewhat turbid ginger extract, containing cardamoms, made with sugar, and inclined to ferment.—HAGER.

MR. H. B. PARSONS gives the following: Potassium iodide, 2.5 grams; concentrated sarsaparilla decoction, 15 grams; bitter almond-water, 10 grams; syrup, 30 grams; Parrish's simple elixir, 50 grams; caramel, sufficient to color, and distilled water, 250 grams.

Atropine in Vaseline.—DR. KLEIN, of Vienna, recommends, in place of the ordinary solutions of atropine, to use an ointment prepared as follows:

Sulphate of atropine.....*gm.* 0.05	or *gr.*	¾
Vaseline.....*gm.* 10.00	or *gr.*	160

If the atropine salt is thoroughly triturated with the vaseline it is unnecessary to use any solvent.

The application of this ointment is much easier than the instillation of the solution. It is best applied by means of a camel's-hair brush to the inner surface of the lower eyelid pulled down.

Compound Powder of Liquorice.—DR. E. F. BLACKWELL remarks (*Med. Times*) certain faults in the *Pulvis Glycyrrhizæ Comp.* of the German Pharmacopœia, and offers a substitute. The original formula is as follows:

In each teaspoonful, weighing 36 grains, there are

℞ of pulverized licorice.....	6	grains.
of pulverized senna (āā ℥ i.).....	6	"
of washed sulphur.....	3	"
of pulverized fennel (āā ℥ ss.).....	3	"
of white sugar (℥ iij.).....	18	"

that is, a proportion of laxative to excipient of 1 to 3. He proposes as a substitute the following, under the name of *Pulvis Sennæ Compositus:*

℞ of pulverized senna.....	8	grains,
of washed sulphur.....	8	"
of white sugar (āā ℥ ss.).....	8	"
of pulverized fennel.....	4	"
of pulverized licorice (āā ℥ ij).....	4	"
in all	32	grains, or

an equal proportion of laxative and excipient.

[Dr. Blackwell thinks the amount of sugar in the first formula objectionable, on account of its liability to cause fermentation in sour stomachs, which, considering that the actual amount in one dose is not very great, appears to us to be rather hypercritical. Moreover, people with such decidedly sour stomachs require a different sort of purgative than the one provided in either of these formulas. We have used the old formula for a number of years with excellent results, and have but once or twice found patients with whom it disagreed. Which, after all, is worth something more than a theoretical objection. As a formula of this general nature is likely to be included in the next pharmacopœia, we hope that the one proposed may be generally tried to determine whether it is or is not a real improvement.—ED. N. R.]

Notes on Pharmacopœial Preparations.

(Extracts from the official proposals for alterations of the first edition of the *Pharmac. German.*)*

Ammonium Bromide.

BILTZ has had repeated occasion to prepare this salt, and considers all of the hitherto published processes defective. Among these are: 1, decomposition of bromide of potassium by chloride of calcium and carbonate of ammonium in presence of alcohol; 2, decomposition of bromide of potassium by sulphate of ammonium in presence of alcohol; 3, saturation of hydrobromic acid with potash; 4, prepartion from ferrous bromide and carbonate of ammonium. He prefers the following process:

Cover the bromine with twice its weight of water, in an open flask, and add cautiously, under constant swinging and occasional cooling with cold water, water of ammonia in portions, until all the bromine is just dissolved to a colorless liquid. Now and then the flask will have to be covered with a glass plate. The solution is accompanied by the escape of nitrogen, and it is asserted that only bromide of ammonium is formed. But even in this case, there is formed an oxidized product, bromic or hypobromous acid, just as iodic, etc., acid is formed when dissolving iodine in solution of potassa. For, if a portion of the liquid is acidified, it turns strongly yellow, and chloroform, on being shaken with the liquid, extracts from it free bromine. Now, to reduce the bromate and hypobromite of ammonium to bromide, it is necessary to treat the liquid with hydrosulphuric acid; but, before doing so, enough bromine should be added to render it slightly yellow, or the previous addition of ammonia to the bromine and water is so regulated that a trifling excess of bromine remains uncombined. This is done for the reason that the *colorless* solution first obtained contains a little free ammonia, which would form sulphide of ammonium on passing the gas, and this compound is much more difficult to remove by boiling than free hydrosulphuric acid. After the current of the gas has converted the bromate, hypobromite, and free bromine into bromide, the liquid, which is cloudy from suspended sulphur, is boiled until the excess of the gas is *completely* driven off, and, when entirely cold, filtered through a double filter. The perfectly clear filtrate, which contains some free hydrobromic acid, is now supersaturated with ammonia and evaporated to dryness.

The resulting product is entirely pure, excepting that it contains such small percentages of chlorine as may have been present in the bromine used.

Artificial Carlsbad Salt (Sal Thermarum Carolinensium artificiale).

The formula proposed by the German Apothecaries' Society is as follows:

Chloride of sodium, pure, powd.....	115 parts.
Sulphate of potassium, powd.....	125 "
Sulphate of sodium, dried...	200 "
Bicarbonate of sodium, powd.....	205 "

A white, dry powder. A solution of 6 grams (93 grains) of the above mixture in a liter of distilled water yields a solution corresponding to the natural Carlsbad water.

Cologne (Spiritus Coloniensis).

1. *Schneider's Formula.*

Oil of bergamot.....	90.0 gm.
" lemon	30.0
" lavender..	15.0
" clove	40 gutt.
" rosemary.....	48 "
" thyme.....	24 "
" cinnamon	40
Musk.....	0.06 gm.
Alcohol.....	3780.0 "
Rose-water.....	180.0 "
Orange-flower water.....	180.0 "

The oils are dissolved in the alcohol, the musk added, and the mixture allowed to macerate for 8 days. Then the rose and orange-flower water are added, and after the lapse of another 8 days, the mixture is distilled from the water bath until 4,000 gm. of product are obtained.

2. *Wilm's Formula.*

Oil of neroli.	4 parts.
" lavender.....	4 "
" rosemary.....	8 "
" lemon.....	8 "
" bergamot.....	15 "
Alcohol	1000 "

Macerate a few days, and filter.—*Germ. Apoth. Society.*

Precipitated Sulphate of Iron.

100 parts of coarsely crystalline pure sulphate of iron (ferrous) are dissolved in 160 parts of hot water and 20 parts of diluted sulphuric acid, the solution filtered, and, *after cooling*, poured into 250 parts of alcohol of 0.832, stirring constantly during the mixing, and for a short time afterwards. The liquid is then left at rest for a few minutes, the acid solution poured off, and the precipitate immediately transferred to a filter moistened with alcohol (0.832), or to a funnel loosely stopped with cotton, and washed with alcohol (0.832) until litmus paper is no longer reddened. The magma is then strongly pressed between litmus paper and dried by exposure to air, frequently turning it and renewing the blotting paper, until the odor of alcohol has disappeared and the salt is so far dry that it neither adheres to the fingers nor to dry blotting paper. It is necessary to be extremely careful in drying this salt, since the loss of water of crystallization is not recognizable by the eye, though this is readily seen in the case of the crystallized salt. It is sufficient to expose the precipitated salt, at ordinary temperature (not over 20° C.), to the air for one day, changing the paper frequently. This causes no loss of water of crystallization. On the other hand, if the salt is dried under a glass globe over caustic lime, the water of crystallization is abstracted rapidly, only 3 molecules of it having been found remaining after the third day, in one experiment.

Precipitated sulphate of iron, prepared by the foregoing process, contains fully 7 molecules of water of crystallization. By faulty operation, f. i., by using absolute alcohol for precipitation and washing, the amount of water of crystallization is rendered defective. The salt keeps extremely well, provided the vessels in which it is preserved are kept well closed.

It is not necessary to have free acid adhering to the product, as is the case with the crystals. The salt crystallizes, not in single crystals, but in very minute grains of rhombic tables built upon each other. It is easy to remove the intralamellary moisture by drying. On the other hand, if the precipitate is allowed to remain for some time undisturbed below the alcohol, it compacts itself to larger crystalline lumps, which it is difficult to wash out. Some pharmacists believe that the salt is best preserved in an atmosphere impregnated with alcohol; but, under these circumstances, it acquires, after a few months, an odor of aldehyde, and becomes oxidized.

BILTZ.

(*To be continued.*)

Solubility of Chlorine in Water.—According to Berthelot, the rate of solubility of chlorine in water depends upon the duration of the passage of the gas, the temperature, and the influence of light. Water at 12° C., at normal pressure, dissolves 4 grams of chlorine per liter. This appears to be the highest amount, although on protracted passage of the gas even 6 grams could be made to dissolve; but it is probable that, in the latter case, oxy-chlorine compounds were formed. And this is also probably the explanation of the solubility observed by Pelouze, namely, 8.2 gm. of chlorine at 10° C. in 1 liter of water.—From *Comptes rend.* and *J. Chem. Soc.*

* See the German title in our February number, p. 58.

Making Plasters.—In making large quantities of plasters of resin, iron, etc., the process can be somewhat accelerated by adding the resin or pitch as soon as the complete union of the oleic and margaric acids with the oxide of lead has been effected, so that remelting the lead plaster can be avoided. It is needful, however, that the weight of the product should be carefully calculated, and the ingredients accurately adjusted. Good judgment founded on experience appears to be essential in the manufacture, as there is no known rule for deciding exactly how long to carry on the boiling and how to wash the plaster.

The following formula is given for producing a good white plaster:

Litharge, free from red lead	30 pounds.
Sift into	
Olive oil	58 "
Mix, add	
Water	2 gallons.
Boil two hours, add	
White sugar of lead	1½ pounds.
Previously dissolved in	
Water	½ gallon.

Boil until sufficiently hard and white. The mixture of oil and litharge must be constantly stirred while on the fire.—A. W. NEYNABER in the *Drug. Cir.*

Influence of Light Upon Ferric Salts.—(JOSEF MARIA EDER) The author has made experiments to determine the influence of light upon ferric salts. It was well known before that light reduced the ferric to ferrous salt, in a greater or less degree, but no very precise determination of the total quantity of reduction had heretofore been made. Mr. Eder exposed aqueous solutions, containing *equivalent* quantities of the below-named substances, to sun-light at a temperature of 17° to 20° C., and found—

1. That, in general, ferric salts, in conjunction with oxalic or tartaric acid, are more readily reduced than with citric acid. This is due to the fact that oxalic and tartaric acids can be oxidized with greater ease than citric acid. The reduction of the ferric salt necessitates the oxidation of the organic acid.

2. Ferric oxalate is more readily decomposed by the action of solar light than the double salts of iron and alkalies, and of the latter, the potassic double salt undergoes the least amount of decomposition. It is curious that the greater or less stability of the salts under the action of light corresponds with this behavior when the temperature is raised; for, if only warmed in the dark, ferric oxalate is reduced, but not its double salts.

3. The chlorine is more readily separated from the ferric chloride, under the agency of light, in the presence of oxalic or citric acid, than the oxygen of the corresponding ferric oxy-salt. On the other hand, the contrary takes place in the presence of tartaric acid.

The proportion of reducibility of various ferric salts may be illustrated by the following scheme, in which the reducibility of the first mixture is placed at 100:

Ferric chloride + oxalic acid	100
Ferric oxalate	89
Ammonio-ferric oxalate	80
Potassio-ferric oxalate	78
Ferric tartrate	80
Ammonio-ferric tartrate	80
Ammonio-ferric citrate	75
Ferric chloride + citric acid	19
Ferric chloride + tartaric acid	25

In all these instances, the amount of reduction was ascertained quantitatively.—*The Photogr. News.*

Emulsions of Tar are considered by Dr. Girard to be the best preparations of this substance for either external or internal use. Tar-water is too liable to alteration. Solutions made with the aid of alkalies are for some purposes rendered thereby objectionable, and by the process of maceration and concentration in a water-bath the volatile and better constituents are lost. With the aid of saponin, from soap-bark, M. Lebœuf is able to make an emulsion that is recommended by him as containing the active ingredients. In using the tincture of soap-bark for this purpose, not enough saponin can be taken to produce toxic effects. Such an emulsion is not difficult to take, and is comparatively easy of digestion.—*Med. Times*, from *Le Prog. Méd.*

Composition of Jaborandi.—A new preparation of jaborandi has been introduced in Italy under the name of *Pilocarpina Sciropposa Pura*, which, dissolved in water and applied to the eyes, will cause myosis, which ceases after an hour, when mydriasis will follow and last for 24 to 60 hours. Pure pilocarpine and its salts are said to never produce this secondary mydriasis in any dose. Taking a quantity of this preparation and adding a little hydrochloric acid, Dr. Albertoni found that most of the substance crystallized. These crystals being separated and washed with ether, produced myosis only. The non-crystallizable portion being also applied to the eye, caused mydriasis, resembling, in a general way, the affects of atropia, and not those of pilocarpine. This new product he calls *anti-pilocarpine.*—*Med. Times*, from *Gior. della Saluta.*

Naranjillo.—A rutaceous plant, growing wild in the Argentine Republic, where it is called "naranjillo," and which has recently been described as a new species by Grisebach, under the name of *Xanthoxylum Naranjillo*, has been examined by D. Parodi, whose attention was directed to it through its resemblance to *Pilocarpus* jaborandi in its therapeutic properties, which are those of a sialagogue, sudorific, diuretic, and stimulant. He reports (*Revista Farmaceutica*, Vol. XVIII., p. 409) that he has separated a substance forming salts with acids, having a decided alkaline reaction, and giving all the reactions characteristic of an alkaloid, which he has named "xanthoxylina." The plant also yielded a hydrocarbon, "xanthoxylene" ($C_{10}H_{16}$), analogous to pilocarpene, a crystalline stearoptene, xanthoxylin, and finally an aromatic essential oil, having an odor between balm and lemon. From the great similarity of this plant to jaborandi, it appears worthy of further experiment in a therapeutic direction.—*Pharm. Jour.*

Salicylic Acid in the Foot-and-Mouth Disease of Cattle.—The Duke of Brunswick has of late successfully combated the ravages of this much-dreaded enemy on his estate at Stampen, near Oels, in Prussian Silesia, by treatment with salicylic acid, the well-known antiseptic. Instead of several weeks being required to effect a cure with the remedies hitherto employed, truly surprising results have been brought about within a few days by this new treatment. A solution of the acid is prepared by pouring some hot water on about three tablespoonfuls of salicylic acid in an earthen vessel, and adding lukewarm water to make up a gallon. The mouth and feet of the diseased animal should be carefully washed three times a day with this liquid, and the tops of the hoofs well powdered with the dry acid after each ablution. The effect will, moreover, be greatly increased by salicylating the drinking water of the beasts by the addition of two tablespoonfuls of the acid dissolved in hot water. During the above treatment, great attention must be paid to the perfect cleanliness of the stables or sheds. The dung must be saturated with salicylic solution to prevent further infection, for it is chiefly in the dung that the germs of the disease are to be found.—*Scient. Amer.*

Disguising the Taste of Chloral.—The taste of chloral may it is said, be disguised effectually by administering it in syrup of gooseberries, adding a drop of chloroform for each grain of chloral.

Chloral Hydrate in Chronic Bronchitis.—A solution of 10 grains of chloral hydrate in one ounce of water is strongly recommended as a cure for chronic bronchitis in elderly persons. It is used of this strength as an inhalation through a steam atomizer morning and evening, and is said to afford immediate relief.

BIBLIOGRAPHY.

A TREATISE ON THE MATERIA MEDICA AND THERAPEUTICS OF THE SKIN. By HENRY G. PIFFARD, A.M., M.D., Professor of Dermatology in the University of the City of New York, etc. New York: William Wood & Co., 1881, pp. 351, 8vo. (Wood's Library of Standard Medical Authors.)

THE plan upon which this last work by Dr. Piffard has been constructed is somewhat novel, and is the outgrowth, so it would seem, of the effort of a specialist in medicine to discover, from the review of previous writing, how far the skin participates in the physiological and therapeutical action of the various remedies more or less commonly used. A system of abbreviations and an arrangement of matter is adopted, which greatly facilitates reference and saves space. Each drug is considered under the following general heads: The effects on the healthy skin which follow ingestion of the drug; the effect on the healthy skin produced by its local application; the cutaneous affections in which the drug has been found curative or useful when used internally; and the affections of the skin in which the local application of the drug has been found valuable.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By LOUIS A. DUHRING, M.D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, etc. Second edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co., 1881, pp. 644, 8vo.

THE author states that the entire work has undergone revision, many chapters having been entirely rewritten, and new matter appearing on nearly every page. The author is one of those who recognize some connection between the condition of the skin and of the general system, and does not, like the Hebra-ists, confine his observations as to the nature of skin diseases to the organ alone. This fact, in our estimation, greatly adds to the value of the work as a practical guide.

HOW TO USE THE FORCEPS. With an introductory account of the female pelvis and of the mechanism of delivery. By HENRY G. LANDIS, A.M., M.D. Illustrated. New York: E. B. Treat, 1880, pp. 168, 8vo. $1.50.

HAND-BOOK OF URINARY ANALYSIS; CHEMICAL AND MICROSCOPICAL: For the use of Physicians, Medical Students, and Clinical Assistants. By FRANK M. DEEMS, M.D., Laboratory Instructor in the Medical Department of the University of New York, etc. 12mo, Limp Cloth, 25 cents. New York: Industrial Publication Company, 1880.

THIS manual presents a plan for the systematic examination of liquid urine, urinary deposits, and calculi. It is compiled with the intention of supplying a concise guide, which, from its small compass and tabulated arrangement, renders it admirably adapted for use, both as a bed-side reference book and a work-table companion.

A MANUAL OF DISEASES OF THE THROAT AND NOSE. By FRANCKE HUNTINGTON BOSWORTH, A.M., M.D., Lecturer on Diseases of the Throat in the Bellevue Hospital Medical College, etc. New York: William Wood & Co., 1881, pp. 427. 8vo.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. Including Localized and General Faradization, Localized and Central Galvanization, Electrolysis and Galvano-Cautery. By GEORGE M. BEARD, A.M., M.D., etc., and A. D. ROCKWELL, A.M., M.D., etc. Third edition. Revised by A. D. Rockwell, M.D. With nearly two hundred illustrations. New York: William Wood & Co., 1881.

TRANSACTIONS OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA. Held at Wilmington, N. C., May 11th, 1880, pp. 144, 8vo.

THE RELATIONS OF SCIENCE TO MODERN LIFE. A Lecture delivered before the New York Academy of Sciences on Feb. 19th, 1880. By HENRY C. POTTER, D.D. Published by the Academy, 8vo, New York, 1880.

ENSAYO SOBRE UNA NUEVA CLASIFACION DE LAS ROSAS DE EUROPA, ORIENTE Y REGION DEL MEDITERRÁNEO. Por D. MIGUEL GANDOGER. Traducido por D. Ramon Martin Cercós. 8vo, Barcelona, 1880.

THE author establishes 11 sub-genera, comprising 798 species of Rosa indigenous in Europe, the Orient, and the countries about the Mediterranean. This little pamphlet affords a very complete survey of the existing species and varieties, and his classification is based upon a close study of the peculiarities of each species.

VERGLEICHENDE UNTERSUCHUNG EINIGER INDISCHEN HANDELSSORTEN DES ARABISCHEN GUMMI. Von Mag. Pharm., EMIL MASING in Dorpat (reprint from the Archiv d. Pharm., 1880).

THE contents of this pamphlet will be noticed elsewhere.

VERGLEICHENDE UNTERSUCHUNG EINIGER CATECHU- UND GAMBIR-PROBEN; nebst Kritischer Beleuchtung der Methoden zur Bestimmung ihres Handelswerthes. Inaug.-Diss. von ADOLF LEHMANN. 8vo, Dorpat, 1880.

BEITRÄGE ZUR KENNTNISS DER ALOE Inaug.-Diss. von CARL TREUMANN. 8vo, Dorpat, 1880.

DAS VERHALTEN DES SCHIMMELGENUS MUCOR zu Antisepticis und einigen verwandten Stoffen mit bes. Berücksichtigung seines Verhaltens in zuckerhaltigen Flüssigkeiten. Inaug.-Diss. von BRONISLAW WENCKIEWIECZ. 8vo, Dorpat.

[THE preceding three pamphlets we owe to the kindness of Prof. G. Dragendorff. They will be noticed elsewhere.]

VERSUCHE ÜBER DIE WIRKUNG DES PEPSINS AUF EINIGE ANIMALISCHE UND VEGETABILISCHE NAHRUNGSMITTEL. Inaug.-Diss. von FRIEDRICH KESSLER. 8vo, Dorpat (from Prof. G. Dragendorff).

AN abstract of this will be found in our February number, p. 41.

EIN BEITRAG ZUR KENNTNISS DES LEVULINS, TRITICINS, UND SINISTRINS. Von AD. WEYHER V. REIDEMEISTER. 8vo, Dorpat, 1880 (from Prof. G. Dragendorff).

KALENDARZ DO UZYTKU FARMACEUTÓW I CHEMICÓW NA ROK 1881, etc. 16mo, Lwów, 1880 (from Dr. M. Dunin Wasowiecz).

CALENDAR for the use of pharmacists and chemists, for the year 1881, etc. 16mo, Lemberg, 1880 (in Polish). Contains several very useful tables and a list of antidotes against poisoning by Dr. M. Dunin Wasowiecz, based upon that of T. Schlosser.

PHOTOGRAPHS OF MEDICINAL PLANTS FROM NATURAL SPECIMENS. By C. L. LOCHMAN (of Bethlehem, Pa.).

THE beautiful series of photographs published by Mr. Lochman, which we have repeatedly noticed before, has received a further addition by the recent issue of the following plates: *Leonurus cardiaca* L., *Epiphegus virginiana* Bart., *Anethum Fœniculum* L. (*Fœniculum vulgare* DC.). *Melissa officinalis* L., var. *citrata* Bischoff, *Quercus alba* L., *Chenopodium ambrosioides* L., *Ficus carica* L., *Penthorum sedoides* L., *Ricinus communis* L. *Aspidium Filix-mas* Swartz, *Diospyros virginiana* L., *Hamamelis virginica* L.

REPORT ON THE CULTURE OF THE SUGAR-BEET AND THE MANUFACTURE OF SUGAR THEREFROM IN THE UNITED STATES. Prepared under the direction of Hon. WM. G. LEDUC, Commissioner of Agriculture. By WM. MCMURTRIE, E.M., Ph.D. Washington: 1880, pp. 294, 8vo. Illustrated.

NEW BOOKS.

Tuloup (G. P.). Etude historique de la grande Ciguë et de son Alcaloïde, la Conine; du Bromhydrate de Conine; son Emploi en Thérapeutique. 8vo, pp. 153. Paris.

Morshead (E. A.). Tables of the Physiological Action of Drugs. 12mo. London. 1*s.*

Husmann (G.). American Grape-Growing and Wine Making; with Contributions from well-known Grape-Growers, giving a Wide Range of Experience. 12mo. illust., pp. 243. New York. $2.00.

Rabbinowicz (Dr. J. M.). La Médecine du Thalmud, ou Tous les Passages concernant la Médecine extraits des 21 Traités du Thalmud de Babylone. 8vo. Paris, 10 fr.

Auerbach (G.). Das Anthracen und seine Derivate. Für Technik u. Wissenschaft bearbeitet. 2te Aufl., 8vo, Braunschweig. $2.60.

Bargmann (Arthur). Petroleum und Erdwachs. 12 illust., 8vo, Wien (Hartleben). *fl.* 1.80.

Baillon (H.). Natural History of Plants. Vol. 6. 8vo, London, pp. 500. 25*sh.*

Brauer (Ernst). Die Construction der Waage, nach wissenschaftlichen Grundsätzen, und nach Massgabe ihres Specialzweckes, zum Gebrauch für Fabrikanten, sowie f. technische Lehranstalten. 8vo, Weimar, 1880.

Cairus (F. A., A.M.). A Manual of Quantitative Chemical Analysis, for the use of Students. (The author is instructor of Analytical Chemistry in the School of Mines, Columbia College, New York). 8vo, N. Y.

Earle (J.). English Plant Names from the Tenth to the Fifteenth Century. 18mo, London, pp. 232. 5*sh.*

Eagle (John). A Note-book of Solubilities, arranged chiefly for the Use of Prescribers and Dispensers. London, 1880.

Flugge (Dr. C.). Lehrbuch d. hygienischen Untersuchungsmethoden. Eine Anleitung zur Anstellung hygienischer Untersuchungen und zur Begutachtung hygienischer Fragen f. Aerzte und Chemiker, etc. (With 86 illustrations, 4 lithograph plates, and 15 tables). 8vo, Leipzig. *m.* 14.

Liebermann (Dr. Leo). Grundzüge der Chemie des Menschen. 8vo. Stuttgart. $2.20.

Kreusler (Dr. U.) Lehrbuch der Chemie, nebst einem Abriss der Mineralogie. 8vo. $3.00.

Zeitschrift fuer Instrumentenkunde. Organ für Mittheilungen aus dem gesammten Gebiete der wissenschaftlichen Technik. Herausg. von E. Abbe (und anderen). 4to (monthly, with illustrations). Per year, 15 marks.

Leigh (J. S.). The Manufactures and Commercial Establishments of the World. No. 1, etc., folio. Published weekly. London. Each 1*s.*

Gamgee (Arth.). A Text-book of the Physiological Chemistry of the Animal Body, including an account of the chemical Changes occurring in Disease. Vol 1. London, 1880. 21*s.*

Leeds (A. R.). The Literature of Hydrogen. 8vo, pp. 64. New York. $0.40.

Morton (W. T. J.). A Manual of Pharmacy for the Student of Veterinary Medicine. 8th ed., 12mo, pp. 560. London. 10*s.*

Godeffroy (Rich.). Compendium der Parmacie. Chem.-Pharm. Præparatenkunde, etc. (In about 20 parts.) Part 1–7. 8vo. Wien. Each 1*m.*

Farmacopea Italiana, ossia Diccionario popolare di Farmacia e Terapeutica con l'aggiunto delle sostanze alimentari, preparati e metodi industriali piú comuni compilato . . . solla direz. da Guiseppe Gallo. Part 1–9. (To be published in about 25 parts.) Price, complete, 24 lire.

Chiapero (Franc.) **e Bassi** (Rob.) Compendio di Farmacologia veterinaria. 3d ed., 16mo, pp. 362. Torino. 4 lire.

Caminhoa (J. M.). Catalogue des Plantes toxiques du Brésil. Trad. par Rey. 8vo, pp. 47. Paris.

Jahrbuch der Erfindungen und Fortschritte auf den Gebieten der Physik u. Chemie, der Technologie etc. Von Dr. H. Gretschel and Dr. G. Wunder. 16ter Jahrgang. 8vo. Leipzig. $2.20.

Hager (Dr. Hermann). Handbuch der Pharmaceutischen Praxis. *Ergänzungsband* (*Supplementary Volume*). In about 6 numbers, each 75 cents.

N. B.—Particular attention is called to this, since we know that many of our readers are in possession of the *Handbuch*, which would be incomplete without the above.

Weidel (H.) und **Clamician** (G. L.). Studien über Verbindungen aus dem animalischen Theer. II. Die nicht basischen Bestandtheile. 8vo. pp. 33. Wien. 0.50*m.*

Weidel (H.) und **Herzig** (J.). Studien über Verb. aus dem animalischen Theer. III. Lutidin. 8vo, pp. 47. Wien. 0.70*m.*

Richter (V.). Chemie der Kohlenstoffverbindungen, oder organische Chemie. 2te Aufl. 8vo, pp. 834. Bonn. 11*m.*

Olmedilla (J.). Estudio químico de las generalidades de alcaloides. 4to, pp. 102. Madrid. 6*r.*

Habermann (J.). Ueber das Glycyrrhizin. 2te Abhandlung. 8vo, pp. 32. Wien. 0.50*m.*

Engler (C.). Historisch-kritische Studie über das Ozon. 4to. pp. 67. Halle. 4.50*m.*

Barth (L.) und **Kretschy** (M.). Untersuchungen über das Picrotoxin. 8vo, pp. 38. Wien. 0.60*m.*

Auerbach (G.). Das Anthracen und seine Derivate. 2te Aufl. 8vo, pp. 279. Braunschweig. 7*m.* 20*d.*

Wallach (Otto). Tabellen zur chemischen Analyse. 2 Theile. Square 8vo. Bonn. 4*m.*

Trennungs-Methoden, chemische. Uebungen zum Gebrauche beim Laboratoriums-Unterrichte. Von R. M. 8vo, pp. 28. Graz. 1*m.*

Jarmain (George). Systematic Course of Qualitative Analysis. Arranged in tables. 4th ed., 8vo. London. 1*s.* 6*d.*

Hielbig (Carl). Kritische Beurtheilung der Methoden, welche zur Trennung und quantitativen Bestimmung der verschiedenen China-Alkaloide benutzt werden. 8vo, pp. 86. Dorpat. 1*m.*

Luff (A. P.). An Introduction to the Study of Chemistry, specially designed for medical and pharmaceutical students. 8vo, pp. 80. London. 2*s.* 6*d.*

Kolb (Herm.). Ausführliches Lehr- und Handbuch der organischen Chemie. 2te Aufl. von Ernst v. Meyer. (To be completed in 3 volumes.) Bd. 1, 8vo, pp. 912. Braunschweig. 17*m.*

Villa-Franca (de). Note sur les Plantes utiles du Brésil. 8vo, pp. 40. Paris.

Eichler (A. W.). Syllabus der Vorlesungen über specielle und medicinisch-pharmaceutische Botanik. 8vo, pp. 47. Berlin. 1.50*m.*

Zippel, (Herm.) und **Bollmann** (Carl). Repräsentanten einheimischer Pflanzenfamilien in farbigen Wandtafeln mit erläuterndem Text etc. Section II.: Phanerogamen. No. 1 (with atlas of 14 chromolith. plates). 14*m.*

Figuier (L.). Histoire des Plantes. 3d ed., 8vo. Paris. 10 *fr.*

Dodel-Port (Arnold). Illustrirtes Pflanzenleben. Gemeinverständliche Abhandlungen etc. mit zahlreichen Original-Illustrationen. Series I. in 10 numbers. So far out, Nos. 1 and 2, each 1 *fr.* 25*c.*

Laporta (G. Graf von). Die Pflanzenwelt vor dem Erscheinen des Menschen. Uebers. von Carl Vogt. 8vo. $4.80.

Elsner (Dr. Fritz). Die Praxis des Nahrungsmittel-Chemikers. Anleitung zur Untersuchung von Nahrungsmitteln und Gebrauchs-Gegenständen, etc. 8vo. Leipzig, 1880. 4*m.*

Avé-Lallemant (Robert, M.D.). Wanderungen durch die Pflanzenwelt der Tropen. 8vo. Breslau, 1880.

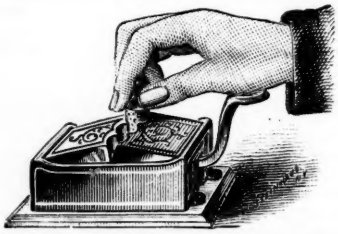
Kekulé (Prof. Dr. Aug.). Chemie der Benzolderivate oder der aromatischen Substanzen. Fortgesetzt unter Mitwirkung von Dr. R. Anschutz u. Dr. G. Schultz. II., 1, 8vo. $2.20.

TRADE NOTES

REQUA & WETMORE, of 130 Fulton street, are the successors to J. J. Requa, whose dime specialties and druggists' sundries have before been noticed by us. Their latest additions are **Cachous** and **Toothache Drops,** the former silver-coated, and both put up in 1½ drachm homœopathic vials.

"**The Argenseta**" is the name of a hair brush, with metallic bristles, manufactured by F. LOONEN & SON, for whom MR. GEORGE R. GIBSON, of 98 Chambers street, New York, is agent in America. About the margins the usual pig's bristles are used, so that the brush presents nothing, at first glance, to distinguish it from any well-made hair-brush; but, on closer examination, it is found that all but the outer row of tufts are made of fine iron wires, not standing independently of each other, as is the case with most other wire hair-brushes, but they are drawn into the back in the same manner that bristles are treated, and, being very fine, they thus afford each other the requisite support. We have tried one of these brushes, and find that it is very effectual and satisfactory. It smoothes and polishes the hair very thoroughly without scratching or irritating the scalp.

FROM SMITH'S HOMŒOPATHIC PHARMACY, at 104 Fourth avenue, in this city, we have several novelties. The **Climax Cork Press** is certainly the handiest appliance yet offered for compressing vial corks, since it permits of the work being done with one hand, as shown in the illustration. The press is a variety of toggle-joint, between the jaws of which the cork is held with the fingers, while the lever is depressed with the base of the thumb. A spring, concealed by the case, opens the jaws when pressure is taken off from the lever. The price is only 50 cents.



The same firm manufacture a **Wood-topped Cork** for bottles, in which the cork is provided with a cap of wood, which greatly facilitates its removal from a vial or bottle, and forms a very elegant finish. Owing to its breadth, the cap can be grasped in the same way that the ordinary "mushroom stopper" is held, and sufficient torsion exerted to dislodge it without the necessity of resorting to a corkscrew. The cap is provided with a central vertical projection, which is glued fast in the centre of the cork, so that the latter must be destroyed before they can be separated.

Another convenient article, made by the same firm, is the book of cut and gummed labels. Ten of each label comprise a page, and any one can readily be detached from its fellows by tearing the slight connection left at the ends. Heretofore labels have been made in sheets, which, after a few labels have been cut out, become so ragged that they are almost useless, or give rise to much trouble.

The "List of Medicines Mentioned in Homœopathic Literature," prepared by HENRY M. SMITH, M.D., and recently published by the above firm, is a very handy addition to the medicine case of any one who has occasion to use the articles of the homœopathic materia medica. It is an 8vo of 160 pages, and comprises some 2,000 titles. In addition to the very complete list of synonyms, the book mentions the part of the plant or substance employed, and the form of preparation used in homœopathic pharmacy.

H. THAYER & CO., of Cambridgeport, Mass., make a very agreeable **Cachou Lozenge,** which is put up in a neat brass box with a sliding cover and rounded corners, that adapt it for the pocket. A very simple but effective contrivance prevents the cover of the box being entirely withdrawn.

Botanical Exchange Bureaus.—Among our readers, there are doubtless some who will take special interest in the following brief résumé of the objects and statutes of one of a most useful society, established for the purpose of exchanging botanical specimens, namely, the "Schlesischer Botanischer Tausch-Verein" (Silesian Botanical Exchange Society). This society has now been in existence for eighteen years, and during the past year ninety-four members have sent in contributions.

Each participant or member is required to send to the Secretary, before October 10th of each year, an alphabetical list of phænogamous and cryptogamous plants which he will furnish for exchange, provided with the author's name, place of growth, and the number of copies of each. From the lists received, the Secretary prepares a general list and sends this to the members, who will have to notify him within fourteen days [a longer term would no doubt be set for persons living at a great distance] of their desiderata. During March, or at latest in April, the members receive a list of the plants which they will be required to send in at once. The distribution of the specimens takes place as soon as possible, generally during April and May.

During the past year no less than 51,699 were distributed to 94 regular members and 57 other contributors.

Those who intend to join the Society should address Mr. Adolph Toepffer, Brandenburg a. H., Prussia, who will furnish a copy of the by-laws containing detailed conditions under which the exchange is regulated.

The Number of Existing Species of Plants.—DR. MÜLLER, of Geneva, has recently made the following calculation as to the total number of existing botanical species: We have at present, described in our books, about 130,000 species; and if we suppose that, in round numbers, 30,000 belong to countries like Europe and North America, where there are hardly any species, excepting some cryptogamic ones, to be discovered, the remainder, or 100,000, representing exotic plants, more or less tropical or southern, we may double the latter for new species, giving 200,000 for these less known regions, and altogether 230,000 for the whole globe, with the exception of countries still quite unknown botanically. Adding only 20,000 species for the latter, we reach a minimum sum of 250,000 species of plants.

Preserving Fluid for Meat.—J. WICKERSHEIMER, whose patent of a preserving fluid for anatomical specimens was purchased by the German government (see NEW REM., 1880), has patented a new liquid for the preservation of meat intended for food. Its composition is as follows: 36 grams of potassa, 15 grams of chloride of sodium, and 60 grams of alum are dissolved in 3 liters of water, the solution heated to 50° C. (122° F.), and afterwards 9 grams of salicylic acid added, together with 45 grams of methylic alcohol and 250 grams of glycerin. In smaller animals, 100 grams of the liquid are used for every kilogram of weight of body; in larger animals, the amount may be reduced to 40 grams per kilo. The liquid is either injected, before slaughtering, directly into the heart, or, after slaughtering, in the carotid. In the case of neat cattle and hogs, 3 grams of saltpetre are added to the above liquid. The conserving power of the latter may be augmented by increasing the methylic alcohol to 20 grams, salicylic acid to 12 grams, and glycerin to 450 grams per liter of liquid. The meat may then be preserved two or three weeks entirely without odor.—*Chem. Zeit.*, 1880, No. 52.

FORMULAS.

Eau de Cologne.

Oil of bergamot	fl. ʒ 2
" lemon	fl. ʒ 2½
" cedras	fl. ʒ 1
" rosemary	fl. ʒ ½
" neroli	fl. ʒ 1
Benzoic acid	grs. 5
Alcohol, pure	2 pints

Digest for a few days and filter.—*Chem. Journ.*

Essence of Tea Rose.

Oil of rose	fl. ʒ 2
" patchouli	fl. ʒ 2
Alcohol	fl. ℥ 12. M.

Tooth Powder.

1. Precipitated chalk	℥ 8
Powdered myrrh	1
" cuttle-fish bone	2
" orris root	3
Sulphate of quinine	grs. 10
Oil of cinnamon,	
" rose,	
" cloves	āā..gtt. 5
2. Precipitated chalk	4 lbs.
Powdered orris root	1 lb.
Brown (Windsor) soap	½ "
Oil of cloves	fl. ʒ 5
Alcohol	fl. ℥ ½

Mix, and keep for some time before putting into boxes.

3. Powdered orris root	℥ 2
" borax	1
Precipitated chalk	4
Powdered cuttle-fish bone	4
" krameria	2
" myrrh	1

—*Chem. Journ.*

Simple Elixir.—Mr. J. B. Moore proposes the following as an improvement upon the formula published by the American Pharmaceutical Association:

℞ Oil of cinnamon (Ceylon)	♏ xlv.
" orange (*fresh and prime*)	fl. ʒ ij.
Deodorized alcohol	q. s.
Hot water (200° Fahr.)	fl. ℥ lxx.
Sugar, granulated	Troy oz. xl.
Water	q. s.
Carbonate of magnesium	Troy oz. vi.

Dissolve the sugar in the hot water in a suitable bottle, and add to the solution two pints of deodorized alcohol. Mix well.

Rub the oils with the carbonate of magnesium in a suitable mortar, for at least 10 minutes. Triturate the mixture thoroughly with two pints of the hot menstruum very *gradually* added, then transfer the mixture to the bottle containing the remainder of the menstruum and shake the whole vigorously for several minutes. Then set it aside, shaking occasionally, and when cool filter through paper and add, through the filter, sufficient of a mixture of one part of deodorized alcohol and three parts of water to make the filtered liquid measure eight pints.—*Drug. Cir.*

Soluble Compressed Pellets as a Medium for Remedies for Hypodermic Use.—Dr. A. Wilson recommends the following formula for the preparation of compressed pellets which are readily soluble in water when required for use, and which possess the advantages also of being capable of preservation for indefinite periods; of uniformity of dosage, and of causing no irritation when properly injected under the skin.

℞ Morphiæ hydrochlor., gr.	¼ .015
Atropiæ sulph., gr.	1/150 .0004
Sodii chloridi, gr.	¼ .015

Mix and make into one compressed pill.

One of these pills, being placed in a teaspoon with about 30 minims of clean water, can readily be broken up and dissolved with the aid of the syringe, and after being mixed by being drawn into and expelled from the syringe two or three times can then be injected. These pellets can also be used by the mouth when desired.—*Med. Times.*

Sulphate of Zinc is recommended as a substitute for nitrate of silver in diseases of the digestive organs, by Niewodniczanski, *e. g.*, acute and chronic affections of the stomach, gastralgia, and diarrhœa. Combinations with opium or codeia are not necessary. It may be used in doses of 6 to 10 centigrams daily.

Vehicle for Salicylic Acid.—

Salicylic acid	ʒ i. ℈viij.
Citrate of potassium	ij.
Glycerin	ʒ viij.
Simple elixir, sufficient for	O. j.

Dissolve the citrate in the glycerin with the aid of a gentle heat, and then stir in the acid, maintaining the heat till all is dissoved. When cooled, the elixir is to be added and the mixture strained. Each fl. ʒ contains 5 grains of the acid and is miscible with water in all proportions.

To Blacken Brass, dissolve 30 parts of carbonate of copper in 250 parts of water of ammonia, and add 500 parts of water. The brass objects to be blackened are suspended in the liquid by means of a brass or copper wire. The coated objects should not be polished with emery, but rather with an oiled rag.

Silvering by Cold Rubbing.—Make a paste by thoroughly grinding in a porcelain mortar, out of the light:

Water	3 to 5 oz.
Chloride of silver	7 oz.
Potassium oxalate	10½ oz.
Salt (common)	15 oz.
Sal ammoniac	3¾ oz.

or,

Chloride of silver	3½ oz.
Cream of tartar	7 oz.
Salt (common)	10½ oz.
Water, to form a paste.	

Keep in a covered vessel away from the light. Apply with a cork or brush to the clean metallic (copper) surface, and allow the paste to dry. When rinsed in cold water, the silver presents a fine frosted appearance, the brightness of which may be increased by a few seconds' immersion in dilute sulphuric acid or solution of potassium cyanide. The silvering bears the action of the wire brush and the burnishing tool very well, and may also be "oxidized." Should a first silvering not be found sufficiently durable after scratch-brushing, a second or third coat may be applied. This silvering is not so adhering or white on pure copper as upon a gilt surface.

For the reflectors of lanterns, the paste is rubbed upon the reflector with a fine linen pad; then, with another rag, a thin paste of Spanish white or similar substances is spread over the reflector and left to dry. Rubbing with a fine clean linen rag restores the lustre and whiteness of the silvered surface. The paste is sometimes mixed directly with the whiting and left to dry, or until nearly dry, then rubbed down as described.—*Scientific Amer.*

Hair-Dyes.—(J. F. Braga.) A solution of silver nitrate (10 grams per litre), when used for some time as a hair-dye, produces a dull reddish-brown tint. This is particularly noticeable when the light falls very obliquely. This defect is avoided by adding a small quantity of copper solution to the silver nitrate: 36 grams of silver nitrate and 2.5 grams of copper sulphate are dissolved in 250 c.c. of water, sufficient ammonia to redissolve the precipitate, and the whole made up to 1 litre with water.

An "instantaneous dye" is obtained by treating the hair first with a solution of pyrogallic acid, made strongly acid with acetic acid, and when it is almost dry the silver and copper solution of the above strength is added. All shades from brown to black may be obtained by varying the strength of the pyrogallic acid from 1 to 50 grams per litre.—*Chem. News*, 42, 8.

NOTES, QUERIES AND ANSWERS.

Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us, as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for the formula of an unusual, patented, or proprietary compound, always accompany the query with any information you may already possess regarding the locality in which it is used, its use and reputed effects, in order to enable us to make inquiry without waste of time and labor. When it can conveniently be done, send also a specimen of the label used on packages of the compound.

No. 870.—**Normal Constituents of Urine** (A. W., M.D.).

According to Thudichum, the *average* composition of *normal urine, for twenty-four hours*, of men weighing from 60 to 65 kilos (132 to 143 lbs.), is as follows:

Average quantity, from 24 hours,	1,400–1,600 cubic centimetres.
Average specific gravity	1.020
Mean amount of solids	55–66 grams.
Urea	30–40 "
Uric acid	0.5 "
Xanthine-like alkaloid	undetermined.
Kreatine	0.3 grams.
Kreatinine	0.45 "
Reducine	undetermined.
Hippuric acid	0.5 grams.
Indigogen, Urrhrodinogen, Phenol-producing substance, Cresol-producing substance, Chromogen of urobiline, Omichmyl-oxide, Urochrome	undetermined.
Acetic acid	0.288 grams.
Formic acid	0.05 "
Kryptophanic acid	0.65 "
Carbonic acid	undetermined.
Chlorine	6–8 grams.
Chlorides of sodium and potassium	10–13 "
Sulphuric acid	1.5–2.5 "
Other sulphur compounds	containing up to 0.2 grm. of sulphur in 24 hours.
Phosphoric acid	3.66 grams.
Potassium, Sodium	undetermined.
Calcium oxide	0.17 grams.
Magnesium oxide	0.19 "
Earthy phosphates	1.28 "
Iron	undetermined.
Ammonia	0.7 grams.
Trimethylamine	undetermined.
Biliary acids	0.012 grams.
Dinitrogenized derivate of sarcolatic acid, oxaluric acid, oxalic acid	undetermined.

The minor estimates account for 48 out of 55 grams of solids, the larger estimates for 62 out of 66 grams of solids.

No. 871.—**Baking Powder** (Pharmacy).

Good baking powder may be made by separately drying 2 parts of powdered tartaric acid and a mixture of 3 parts each of bicarbonate of sodium and potato-starch, at a very gentle heat, mixing them in a perfectly dry room, passing the mixture through a sieve, and at once inclosing it into air- and moisture-tight packages.

Horsford's baking powder consists of two separate powders, one being pure bicarbonate of sodium, the other an acid phosphate of calcium and magnesium. This latter is prepared by decomposing bone-ash with sulphuric acid, evaporating the clear-strained solution to a syrupy consistence, mixing with starch-flour and drying. According to the quantity of starch present, 3 to 3½ parts of the acid powder are to be used for every 1 part of the alkali. To obtain as great a nutritive power as possible, it is desirable to add a small amount of potassium salts, and for this reason, Liebig (*Dingler's Polyt. Journ.*, 191, 160) recommended to use bicarbonate of sodium and chloride of potassium. According to the investigations of Liebig, 50 kilos of flour require 1338 gm. of the acid powder and 841 gm. of the alkaline powder, consisting of 446 gm. of bicarbonate of sodium and 395 gm. of chloride of potassium.

No. 872.—**Formulæ Asked For.**

One of our correspondents asks for the formula of *Elixir de Grez*, a French preparation said to contain pepsin, pancreatin, coca, and bitters.

Correspondents also desire to know the composition of the following nostrums: 1. The Green Mountain Asthma Cure, prepared by Dr. J. H. Guild, of Rupert, Vt. 2. King's Specific for the Permanent Cure of Dyspepsia and Indigestion; Richard King, Surgeon, Royal Navy, Rugby, England.

No. 873.—**Spir. Æth., etc.** (Xanthoxylum).

This correspondent asks us what "Spts. Æther. Sulph. Ar." means, which he has been asked for, but which he cannot find mentioned anywhere.—As it is written, it means nothing. It is evidently a *lapsus pennæ*, and is meant for Spiritus Ætheris (Sulphurici dulcis, as is sometimes added). Possibly the physician might have intended to write for Spiritus Ammoniæ Aromaticus.

No. 874.—**Chemical Puzzle.**

In answer to Query 840 (February), "What chemical, when added to water, will turn it black, and what chemical will render it colorless again?" we have received a reply from a correspondent, who suggests *nitrate of silver* as the first chemical and *cyanide of potassium* as the second. This will meet the case, provided the water contains sufficient organic matter or other substances which will cause the immediate reduction of the silver, but if none of these are present, or if they are present only in very small quantity, it will take a long time to produce the result. The correspondent who originally proposed the question desired to have both chemicals to produce the change at once.

No. 875.—**Plumbago** (Dr. H. B.).

Plumbago, being a form of carbon, is entirely insoluble in any liquid. It may, however, be kept in suspension, when very finely divided. By triturating with watery solutions containing some gum or other adhesive substance, or by the intervention of oil, plumbago may be, as it were, emulsified.

A good **Polish for Leather** is said to be made by boiling together 8 parts of molasses or sugar, 1 part of gum arabic, and 2 parts of best lamp-black. After some time let cool, and allow to settle.

The price of Calisaya bark you will find quoted in our price-current (pink pages, in the centre).

No. 876.—**Tanjore Pills** (Delta).

These pills are held in great repute among the Hindus as an efficient remedy against the bite of venomous serpents. They were already mentioned by Orfila in his Toxicologie. Their composition is as follows:

Root of *Aconitum ferox* Wall.	part 1.
" *Ophioxylum serpentinum* Willd.	" 1.
" *Aristolochia bracteata* Retz.	" 1.
Arsenious acid	" 1.
Native yellow sulphide of arsenic (orpiment)	" 1.
Native red sulphide of arsenic (realgar)	" 1.
Fruits of *Gardenia dumetorum* Retz	" 1.

The whole is bruised, for about 3 hours, with the juice of betel leaves, and the mass is then formed into pills of about the size of a pea. If any one is bitten by a venomous animal, one of these pills rubbed up with betel leaf juice is administered every 3 or 5 minutes, until three

have been taken, which is the largest dose. Frequently 2 are sufficient. The combination is an exceedingly powerful emetic and cathartic, and is even highly irritant, but perhaps not more so than Hindu stomachs, which are used to highly-spiced food, can bear. Mr. Viand-Grand-Marais, who has lately written on this subject [the publication you inquire about is contained in the *Journal de Médecine de l'Ouest*, 1879], states that, according to his previous observations, and those of Fontana, the poison of snakes is chiefly evacuated through the mucous coat of the stomach; hence the above treatment seems to have a sound basis.

The vegetable ingredient of these pills, excepting the root of *Aconitum ferox*, are not met with in the market outside of India. You will, therefore, have to import them on purpose, which you may do by giving your order to some wholesale or importing house.

No. 877.—**Indelible Ink** (H. A.).

A very good indelible ink may be made from:

Permanganate of potassium.....	6 parts.
Distilled water.....	100 "

The solution is applied to linen, either by writing upon it with a steel pen or by stamping it with a stencil. The salt decomposes and deposits maroon-colored manganic hydrate in the fibre, becoming brown after some time.

NEW PATENTS.

[*Complete specifications and illustrations may be obtained of any one or more of the following patents by sending the number, title, name of patentee, and date of issue, with twenty-five cents for each copy, to the Commissioner of Patents, at Washington, D. C., together with the name and address of the person requesting the same.*]

January 4th, 1881.

236,186. *Bottle-wrapper.*—John Shellenberger, Indianapolis, Ind.

236,214. *Machine for cutting Pills.*—Thomas Daniels, Toledo, Ohio.

236,216. *Marine Paint.*—Robert R. Dimock, New Haven, Ct. Consists in adding glucose to a hot solution of cupric sulphate; then stirring the mixture and adding an alkaline solution; then raising the temperature until a precipitate forms; then collecting, filtering, washing, and drying the precipitate; then adding carbolic acid, and then mixing with raw linseed oil.

236,251. *Refining Apparatus for Spirits.*—Pierre Perey, San Francisco, Cal.

236,261. *Pendulum Scale.*—George F. Richardson, Montague, Mass., assignor to George A. Clapp, and James H. Clapp, same place.

236,283. *Oil Press.*—Gilbert M. Venable, Memphis, Tenn.

236,330. *Process for the Manufacture of Glucose.*—Rudolph d'Heureuse, New York, N. Y.

236,366. *Paint-Mixing Machine.*—William M. Shoemaker, Philadelphia, Pa.

January 11th, 1881.

236,480.—*Compound for Manufacture of Gas-Tubing.* Samuel Burr, Providence, R. I. A compound consisting of glue, 10 pounds; glycerin, 12 pounds; common soap, 4 ounces; borax, 1 ounce; sulphate of iron (copperas) ¼ ounce; and water sufficient to make a thick paste.

236,521.—*Preserving Compound.* Jean Wickersheimer, Berlin, Germany. Consists of 3 liters of water, 36 grams of potash, 15 grams of common salt, 60 grams of alum, 9 grams of salicylic acid, 45 grams of methyl alcohol, and 250 grams of glycerin.

536,538. *Drop Attachment for Bottles.*—Raoul Bravais, Paris, France.

536 583. *Nursing-Bottle Fitting.*—Henry H. Hayes, New York, N. Y., assignor to Goodyear Rubber Company, same place.

January 18th, 1881.

236,671. *Apparatus for Stirring and Drawing Liquids.*—Seabird, H. B. Cochrane, Tippecanoe City, Ohio, assignor of one half to William W. Crane, same place.

January 25th, 1881.

236,885. *Mineral Paint.*—Darwin E. Goodell, Germans, Ohio. The mineral substance which forms the base of the paint is found in strata in coal banks in Harrison county, Ohio, and consists of coaly matter about ⅛, and sand and pyrites about ⅞—or, in one thousand parts; carbon and coal, 300 parts; residue after ignition, 700 parts. This residue contained sesqui-oxide of iron with blackish crust, which was magnetic and silicious, and did not effervesce with hydrochloric acid, but yielded H_2S. This substance, known to miners as "soot," or "soot-band," subjected to heat to purify it, and then ground fine and mixed with oil, varnish, or lacquer, to form a paint.

236,922. *Truss.*—Levi Westinghouse, St. Louis, Mo.

236,926. *Liquid Pond-Lily Soap, for Toilet Purposes.*—Francis Wright and George W. Wright, Washington, D. C. Makes a soponaceous base from vegetable oil or oils, and while making the same adds an extract from the root and leaves, or from either the root or leaves of the pond-lily. This saponaceous base or compound is incorporated with other ingredients to make a toilet-wash in the following proportions: Saponaceous base, 4 parts; water, 10 gallons; aqua ammonia, 1 gallon; borax, 12 ounces; bicarbonate of soda, 1 ounce.

236,997. *Dose-Measuring Bottle.*—James M. Dodge, Chicago, Ill.

237,032. *Vaginal Dilating Pipe.*—Nathan Mayer, Hartford, Ct.

237,058. *Hog-Cholera Compound.*—J. Byron Shook, Circleville, Ohio. Consists of a mixture of Epsom salt, raw linseed oil, spirit of turpentine, black antimony powder, antimonic oxide or white antimony powder, and assafœtida.

ITEMS.

American Microscopical Society of the City of New York.—At the annual election of this Society, held February 9th, the following-named officers were elected for the year 1881: *President*, John B. Rich, M.D., 12 East Twenty-second street, New York; *Vice-President*, John Frey, Bellevue Hospital, New York; *Secretary*, O. G. Mason, Bellevue Hospital, New York; *Treasurer*, T. d'Oremieulx, 7 Winthrop Place, New York; *Curator*, George Wale, Paterson, N. J.

Meetings are held at 8 o'clock P.M., on the second and fourth Wednesday of the month, at No. 12 East Twenty-second street, New York City.

Leprosy in the United States.—At a meeting of the New York Academy of Medicine, held January 20th, 1881, the following resolution was adopted:

Resolved, That a committee be appointed by the President to investigate the extent to which leprosy prevails in the United States.

The President appointed as such committee Drs. H. G. Piffard, F. R. Sturgis, and G. H. Fox.

The committee are desirous of ascertaining the actual number of lepers in this country at the present time, and to that end respectfully request any physician who may know of the existence of a case in his neighborhood to communicate the fact to the Chairman of the committee, at No. 10 West Thirty-fifth street, New York.

St. Louis College of Pharmacy.—At the annual meeting of the Alumni Association of the St. Louis College of Pharmacy, held February 15th, 1881, the following officers were elected for the ensuing year: *President*, J. W. Tomfohrde; *First Vice-President*, F. F. Reichenbach; *Second Vice-President*, J. P. Huhn; *Recording*

Secretary, G. H. M. Goehring; *Corresponding Secretary*, Gust. Brandau; *Treasurer*, Charles Gietner; *Register*, Theo. Klepstein; *Executive Board*, G. H. Goehring, D. Hofbauer, Th. L. Riesmeier, P. Hoffman, A. Pfeiffer, and E. Knoebel.

The reports of the various officers of the past year show the Association to be in a very prosperous condition.

The College of Pharmacy of the City of New York.—The annual meeting of the College took place on March 17th, 1881, when the following officers were elected: *President*, Ewen McIntyre; *Vice-Presidents*, H. J. Menninger, G. C. Close, M. L. M. Peixotto; *Secretary*, P. F. Lehlbach; *Treasurer*, Starr H. Ambler; all to serve for the period of one year. The following were elected *Trustees*, to serve for three years: Charles Rice, P. Balluff, Dav. Hays, Wm. M. Olliffe; and to serve for two years: H. A. Cassebeer, Jr.

The Commencement Exercises were held on March 22d, 1881, at Chickering Hall, when the diploma of Graduate of Pharmacy was awarded to 65 successful candidates, in the presence of a large audience. Mr. Douglas Campbell delivered the valedictory address on behalf of the Faculty and officers of the College, and Mr. Eugene L. Fridenberg, of New York, on behalf of the graduating class.

The following gentlemen head the list of graduates, in the order of merit: Arthur F. May, of Cleveland, Ohio; Frederick Hohenthal, of New York; Wm. Bodebender, of Cleveland, O.; John Pfeiffer, of Hoboken, N. J.; Gustav Roeber, of Franklin, Wis.; Henry H. Funnell, of Huntington, L. I.; Chas. F. Heebner, of Lee, Mass.; Aloys J. H. Van de Bergh, of Mayence, Germ.; Henry U. Braeunlich, of Davenport, Ia.; Réné R. Snowden, of South Carolina; Wm. De Lano, of Ithaca, N. Y.; Fritz Rosenkranz, of Cassel, Germ.; Chas. F. Lord, of Medusa, N. Y.

The other graduates follow here in alphabetical order:

Edward L. E. Aymé, of New York; Chas. A. Bodenstab, of College Point, L. I.; Chas. G. Bruckmann, of New York; Fred. W. Bruckmann, of New York; Ludwig Brunswig, of New York; Benj. Cahn, of Richmond, Va.; Philip K. Clark, of Great Barmington, Vt.; Isaac Cohn, of Russia; Luis E. Cuevas, of Porto Rico, W. Ind.; Wm. H. Dewender, of New York; Wm. R. Dumond, of Catskill, N. Y.; Arthur Fisher, of Mount Eaton, O; Eugene L. Fridenberg, of New York; Geo. J. Geiger, of Newark, N. J.; Frank Gundlach, of New York; Henry Hamerslag, of Germany; Thomas A. Hand, of New York; Rudolph Hanke, of New York; Louis E. Hanmore, of Newburgh, N. Y.; Louis Hess, of New York; Emil T. F. Holthusen, of Bremerhaven, Germ.; Geo. B. Hooker, of Elizabeth, N. J.; Ellison W. Hurd, of New York; Thomas J. Jones, of Bermuda; Wm. Th. Jones, of Louisville, Ky.; Franz Kahlenberg, of Eisleben, Germ.; Joshua O. King, Jr., of Atlanta, Ga.; Hugh A. Klamer, of Vienna, Austria; Carl F. W. Kordenat, of Prussia; John M. A. Laue, of Germany; Andrew Leuschner, of New York; E. H. Oscar Linke, of Germany; Walter S. McCann, of Camp Point, Ill.; Wellington C. McEwen, of Gardiner, N. Y.; Charles F. Mayer, of Ft. Wayne, Ind.; Hugo L. M. Metz, of New York; Edward Miller, of New York; Lucius M. Monroe, Jr., of New Canaan, Ct.; Henry E. Nicoud, of Philadelphia, Pa.; Frank L. Powell, of Newport, R. I.; Emil Rauth, of Brooklyn, N. Y.; Charles Roenbeck, of New York; Jos. H. Rosell, Jr., of Freehold, N. J; Frank M. Roth, of Norwalk, O.; Henry C. Roth, of New Rochelle, N. Y.; Fred. E. Ruppel, of Brooklyn, N. Y.; George N. Sahner, of Germany; Daniel H. Starr, of Fallsburgh, N. Y.; Rudolph Theiss, of New York; Egon C. B. Wernicke, of Austria; Herman Wortmann, of Hoboken, N. J.; Carl Wurm, of Germany.

A Certificate of Proficiency in Chemistry, Materia Medica, and Botany was awarded to Elijah J. Molloy.

The prizes of the Alumni Association were awarded as follows: *1st prize*, gold medal, to Arthur F. May; *2d prize*, silver medal, to Frederick Hohenthal; *3d prize*, bronze medal, to William Bodebender.

At the examination of the *Junior Class*, the following attained the highest average, and their names were proclaimed as constituting the roll of honor: C. Cole Bradley, C. M. Briggs, Henry A. Chapin, Max L. Walters, Oscar Wagner, Edward R. Petty, John M. Hedenberg, Henry N. Siegenthaler, George L. Hill, William V. Everett, E. M. Sedgwick, Louis Winkler.

Maryland College of Pharmacy.—At a regular meeting of the Board of Trustees, held on March 11th, 1881, the following-named students, having successfully passed the several examinations, and in all other respects complied with the necessary requisites for graduations, were entitled to the degree of Graduate in Pharmacy.

Leo. A Strauss, R. P. C. Scheidt, Wm. Caspari, Jr., J. Webb Foster, C. H. Meyer, Robt. Luck, J. F. Anderson, W. B. Dickinson, E. H. Kabernagle, Robt. F. Petzold, Clarence F. Moore, Victor T. Walter, Louis Weibking, B. Nadel Coe, F. H. Copper, Jas. T. Hepbron, Moses Kahn, J. L. Lauer, Ewd. S. McGuire, Walter N. Smith.

The class for the current session is an exceptionally intelligent one, all having answered correctly an unusually large percentage of the questions. Mr. Leo A. Strauss, who was awarded the first college prize, and also the prize for proficiency in analytical chemistry, having answered correctly 165½ out of a possible 168 questions, and Mr. R. P. C. Scheidt (second prize) 163 out of a possible 168, and Mr. J. Webb Foster (third prize) 153 out of a possible 168.

The commencement exercises took place on the 30th of March.

The Wisconsin Pharmaceutical Association will hold its second annual meeting at Milwaukee, on the 9th, 10th, and 11th of August next. Those who desire to exhibit goods at that time will do well to advise the Secretary of the fact (E. B. Heimstreet, Janesville, Wis.), as circulars giving names of probable exhibitors will be sent at an early date to all the druggists of the State.

The Chicago College of Pharmacy.—The fourteenth annual commencement exercises of this institution took place at Fairbank Hall, March 10th, before a large and appreciative audience. The address of the evening was given by Prof. E. S. Bastin, and was responded to, on behalf of the class, by Mr. Emil F. W. Henkel. The prize for the student reaching the highest general average was awarded to Mr. John L. T. Davison, and the Alumni Association badge to Mr. Chas. Schaar, for greatest proficiency in chemisty and botany.

The President, Mr. Caffin, conferred the degree of Graduate in Pharmacy upon the following-named gentlemen:

George L. Corke, John Conrad, John L. T. Davison, Conrad Engsberg, Newton Gray, Frederick Handtmann, Emil F. W. Henkel, Samuel Jackson, Adolph Karpen, Charles Knobloch, Charles E. Kreyssler, Fritz Leuder, Frederick A. Leusmann, Albert G. Manns, S. H. McCammon, William G. McDougall, Charles Schaar, E. Kingsford McPherson, Elmer Eugene Schaeffer, William L. Shockey, Albert W. Schultz.

The past session of the Chicago College of Pharmacy has been the most prosperous in its history, the attendance having reached nearly one hundred, and the general proficiency of the classes being excellent. The latter result is largely due to the system of term examinations, first introduced last season. By this method, written examinations in every branch were held every other week, and the averages of each student during the term were of utmost importance both to the senior and junior students; in the case of the former, the term averages constituted an important factor in deciding their fitness for graduation, while the junior students were required to reach a certain standard of proficiency to insure their admission to the senior class of next fall.

The Chicago College has found it necessary to provide greater accommodations for its constantly increasing classes, and before October next it will occupy the fine building situated on the corner of Michigan Avenue and

Van Buren street, where abundance of room and every facility will be secured.

California Pharmaceutical Society.—A special meeting of the Society was held on the 18th of January, to which all the druggists of the city were invited. A large number responded to the call, for the purpose of discussing the proposed State Pharmacy Act, drawn up by the Committee on Legislation, composed of Messrs. Emlen Painter, William M. Searby, and John Calvert, and which had been indorsed by the society at the previous meeting, before presenting it to the Legislature. Considerable interest was manifested in the subject before the meeting, and, with a few amendments, finally received the approbation of the majority of those present.*

Connecticut Pharmaceutical Association.—The fifth annual meeting was held at Waterbury, Ct., on the 1st of February, President Goodrich presiding, and about fifty members being in attendance. Twenty new members were admitted (making about 200 in all). The Treasurer reported a balance on hand of $1,682.47. The following officers were elected: *President*, L. I. Munson, of Waterbury; *Vice-Presidents*, E. A. Gessner, of New Haven, and N. D. Sevin, of Norwich; *Secretary*, Frederic Wilcox, of Waterbury; *Treasurer*, George P. Chandler, of Hartford. A code of ethics was adopted. The following were appointed Delegates to the American Pharmaceutical Association: H. H. Osgood, F. H. Chapin, T. F. Main, E. A. Gessner, and S. Goodrich. The following Executive Committee was appointed: E. S. Sykes, N. J. Burs, and F. S. Stevens. Also the following Committee on the Progress of Pharmacy: J. K. Williams, F. M. Wilson, and J. C. Nichols. J. G. Ruthbun, of Hartford, was appointed the Historian of the Association for 1881. It was voted to hold a summer meeting at such time and place as might be designated by the President.

Answers were read to a few of the queries accepted last year, and the meeting was declared to have been eminently a satisfactory one.

An exhibition was held in the parlors of the Scovill House, in which the following contributions appeared: Parke, Davis & Co., of Detroit, showed sugar-coated pills, fluid extracts, and other preparations; John Wyeth & Co., of Philadelphia—compressed pills, fluid extracts, and a variety of other articles; the Tarrant Company—essential oils, gelatin and sugar-coated pills, crude drugs, and chemically pure salts; Powers & Weightman, of Philadelphia—rare and choice chemicals, morphia, quinine, citric and tartaric acid, scale preparations of iron and strychnia salts; W. H. Schieffelin & Co.—soluble and sugar-coated pills, fluid extracts, eighty-five specimens of crude drugs, Gardner's hydriodic syrup and elixirs, a case of physiological chemicals, and three albums of medicinal plants. The Waterbury Paper and Box Company were represented by a handsome and varied assortment of druggists' boxes, and E. A. Gessner, of New Haven, by uterine and urethral bougies.

Iowa State Pharmaceutical Association.—The second annual meeting of this Association was convened at Des Moines, on the 9th of February, with President G. H. Schafer in the chair. Following an address of welcome by L. H. Bush, President of the Des Moines Pharmaceutical Association, a lengthy and interesting address was delivered by President Schafer. The following officers were elected: *President*, George B. Nogan, of Newton; *Vice-Presidents*, A. R. Townsend, of Boom; J. W. Ellis, of Patterson; and J. W. Ballard, of Davenport; *Secretary*, H. W. Dodd, of Fort Madison (re-elected); *Local Secretary*, C. E. Harlan; *Treasurer*, C. H. Ward, of Des Moines (re-elected); *Executive Committee*, Norman Lickty, of Des Moines; W. E. Schroeder, of Iowa City; and Max Conrad, of Ottumwa. The following committees were appointed: *Trade Interests*, J. P. van Cise, of Mount Pleasant; E. M. Sapontiere, of Grand Junction; and A. Wisby, of Monroe; *Pharmacy and Queries*, Dr. J. A. Trent, of Stuart; F. W. Brinkerhoff, of Pella; and Dr. J. M. Roberts, of Osceola; *Legislation*, L. H. Bush, of Des Moines; D. G. Steven, of Chariton; and J. B. Dougherty, of Vinton. $100 was allowed to the Secretary for his services during the preceding year. The Executive Committee was authorized to publish 3,000 copies of the proceedings.

A supper and ball followed the meeting, at which the Governor of the State, the retiring President, and others responded to toasts.

* The bill was introduced in the Legislature Jan. 28th.

The Philadelphia College of Pharmacy held its sixtieth annual commencement on the 16th of March, at the American Academy of Music. The degree of Graduate in Pharmacy was conferred upon 140 candidates. Prizes were awarded, and a valedictory address was delivered by Prof. Jos. P. Remington.

Medical and Pharmaceutical Legislation in West Virginia.—A correspondent in Wheeling writes us that the Legislature of that State has lately enacted a law regulating the practice of dentistry; an Act to establish a Board of Health, and regulating the practice of medicine and surgery, and still further, an Act to Regulate the Practice of Pharmacy and the Sale of Medicines and Poisons. A State Pharmaceutical Association is to be organized on the 25th of May, at Wheeling, due notice of which will appear in our next issue.

Florida Arrowroot.—The latest vegetable production from Florida, that "Land of Canaan in which everything that will grow on the face of the earth is said to abound," is a contribution to medicine in the shape of a very large, white and firm specimen of arrowroot, which was exhibited to the students at the New York College of Pharmacy a few weeks ago. We are unable to say whether that is the entire crop raised in the State this year or not, or whether the nutriment which it contains is equal, proportionably, to that of the imported article; but it is very probable that good arrowroot might be produced there in almost any quantity.—*Oil and Drug News.*

PHARMACEUTICAL CALENDAR.—April.

N. B.—The officers of Societies, Colleges of Pharmacy, Pharm. Associations, etc., will oblige us by forwarding schedules of their meetings, lists of officers, and any changes that may be desirable.

Date.	Society Meetings.
Mon. 4th.	Erie Co. Ph. Ass.—Meeting.
	Pittsburgh Coll. Ph.—Quarterly Meet.
	National Coll. Ph.—Annual Meet.
Tues. 5th.	Chicago Coll. Ph.—Annual Meet.
	Georgia Ph. Ass.—Annual Meet. (at Columbus, Ga.)
	Phila. Coll. Pharm.—Trust. Meet.
	Davenport (Iowa) Ph. Ass.—Annual Meet.
	Maryland Coll. Ph.—Trust. Meet.
Thurs. 7th.	N. Y. Coll. Ph.—Trust. Meet.
	Louisville Coll. Ph.—Pharm. Meet.
	Massach. Coll. Ph.—Trust. Meet.
Mon. 11th.	Rhode Island Ph. Ass.—Quarterly Meet.
Tues. 12th.	Kings Co. Ph. Soc.—Meet.
	National Coll. Ph.—Trust Meet.
	Chicago Coll. Ph.—Trust. Meet.
	St. Louis Coll. Pharm.—Pharm. Meet.
	Pittsburgh Coll. Ph.—Trust. Meet.
Wed. 13th.	Cincinnati Coll. Ph.—Mo'and Busin. Meet.
Thurs. 14th.	California Coll. Ph.—Quarterly Meet.
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	New York Germ. Apoth. Soc.—Monthly Meet.
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Tues. 19th.	Phila. Coll Ph.—Pharm. Meet. [Meet.
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SUPPLEMENT TO
"[illegible]," an Illustrated Monthly Trade Journal.
New York, May, 1881.

RHAMNUS PURSHIANA DC.

(See page 151.)

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* The bill was introduced in the Legislature Jan. 26th.

SUPPLEMENT TO
"NEW REMEDIES," an Illustrated Monthly Trade Journal.
New York, May, 1881.

RHAMNUS PURSHIANA DC.

(See page 131.)